

# GEORGE ENGELMANN BOTANICAL NOTEBOOKS

*Pagination Note:  
Since many of the items lack a specific  
page number, the page number displayed  
online refers to the sequentially created  
number each item was given upon  
cataloging the materials.*

1. *Microtus* *oreocetes*  
Heed. 1881  
Mexico 714 H. 11. 1881

Sci. 6

TRANS. OF THE ACADEMY OF SCIENCE.

#### IV. *Direction of Winds and number of Thunderstorms in '61 & '62.*

Modernized  
Capital



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*Additional Remarks on Atmospheric Electricity.*

By A. WISLIZENUS, M.D.

The delay in the publication of this volume enables me to add to my observations of atmospheric electricity in 1861, the result of my observations in 1862. The latter observations have been made in the same manner and by means of the same fine glass thread, which, after many thousand torsions, proves as good as ever. I present herewith in tabular form the general result of my observations in 1861 and 1862.

I. *Monthly mean of Positive Atmospheric Electricity in 1861 and 1862, at St. Louis, Mo., based upon daily observations at 6, 9, 12, 3, 6 and 9 o'clock, from morning till night.*

Jan.	Feb.	Mar.	Ap <sup>l</sup> .	May.	Jun.	Jul.	Aug.	Sept.	Oct.	Nov.	Dec.	Year.
1861*..16.5	12.1	9.8	8.8	7.8	4.0	3.7	3.4	3.0	7.1	10.0	14.3	8.4
1862..12.1	16.0	9.4	10.6	7.5	3.0	2.2	2.3	3.0	7.7	12.6	13.9	8.4

\* This table of 1861 differs in some decimals from that published on page 66 and in Diagram No. 1. Having discovered some errors, I calculated all my observations once more, and give now the present as the corrected table.



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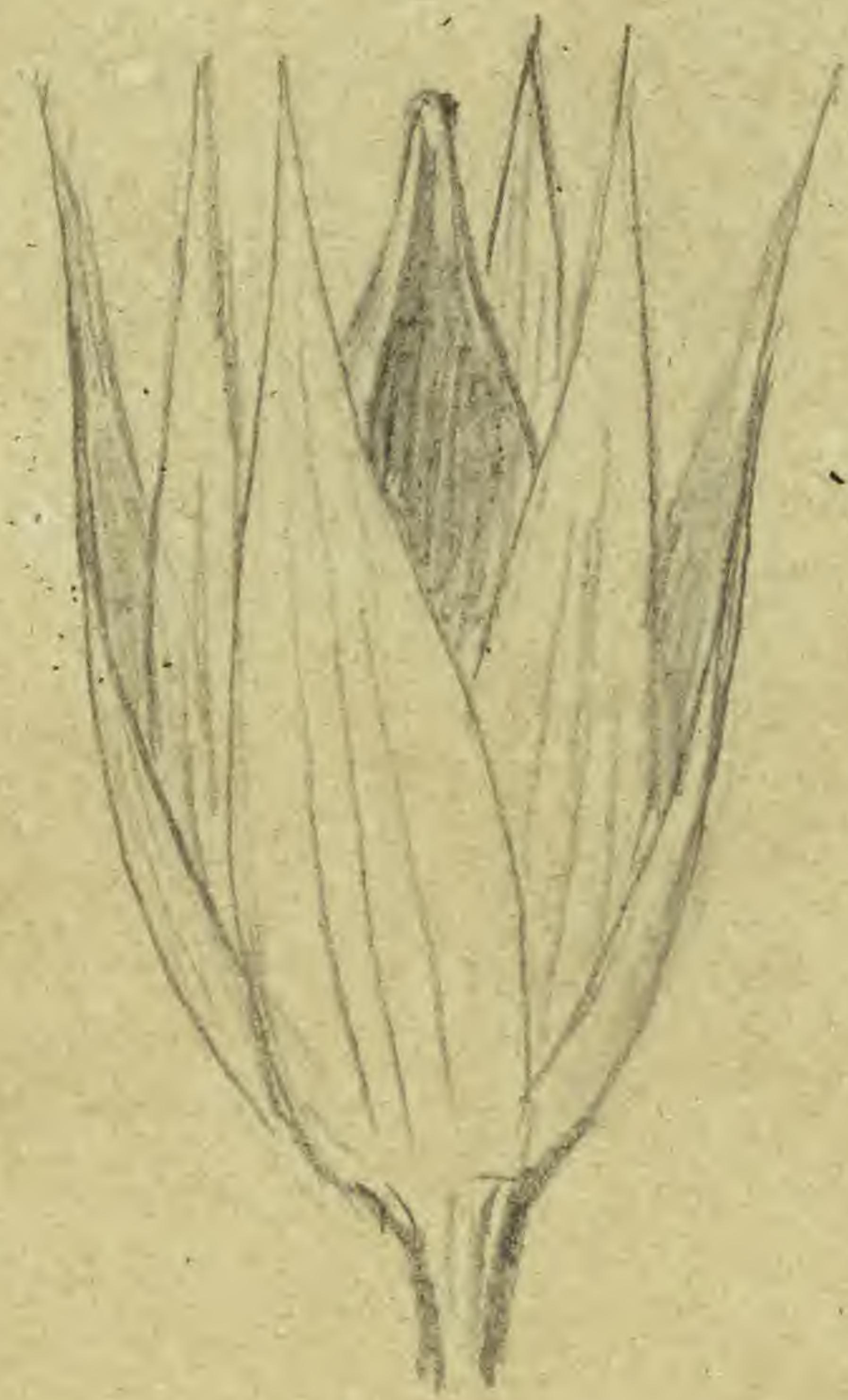
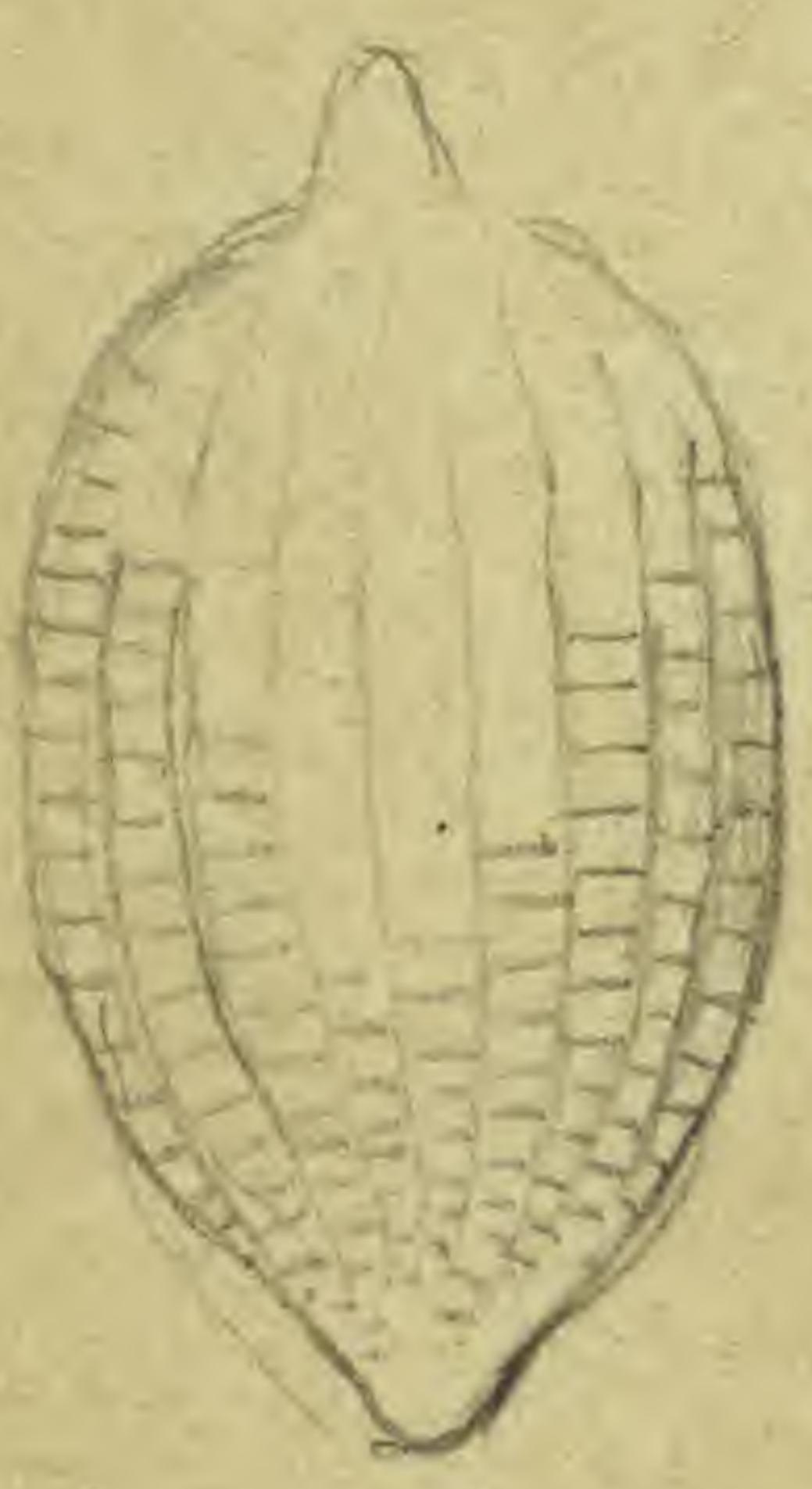
Imperata triandra Liebm (9-E) Sept 24 1865

[Brachystachys] No 744 Mexico in Herb FOB Mission

capit 8-12 flora

x60

x10



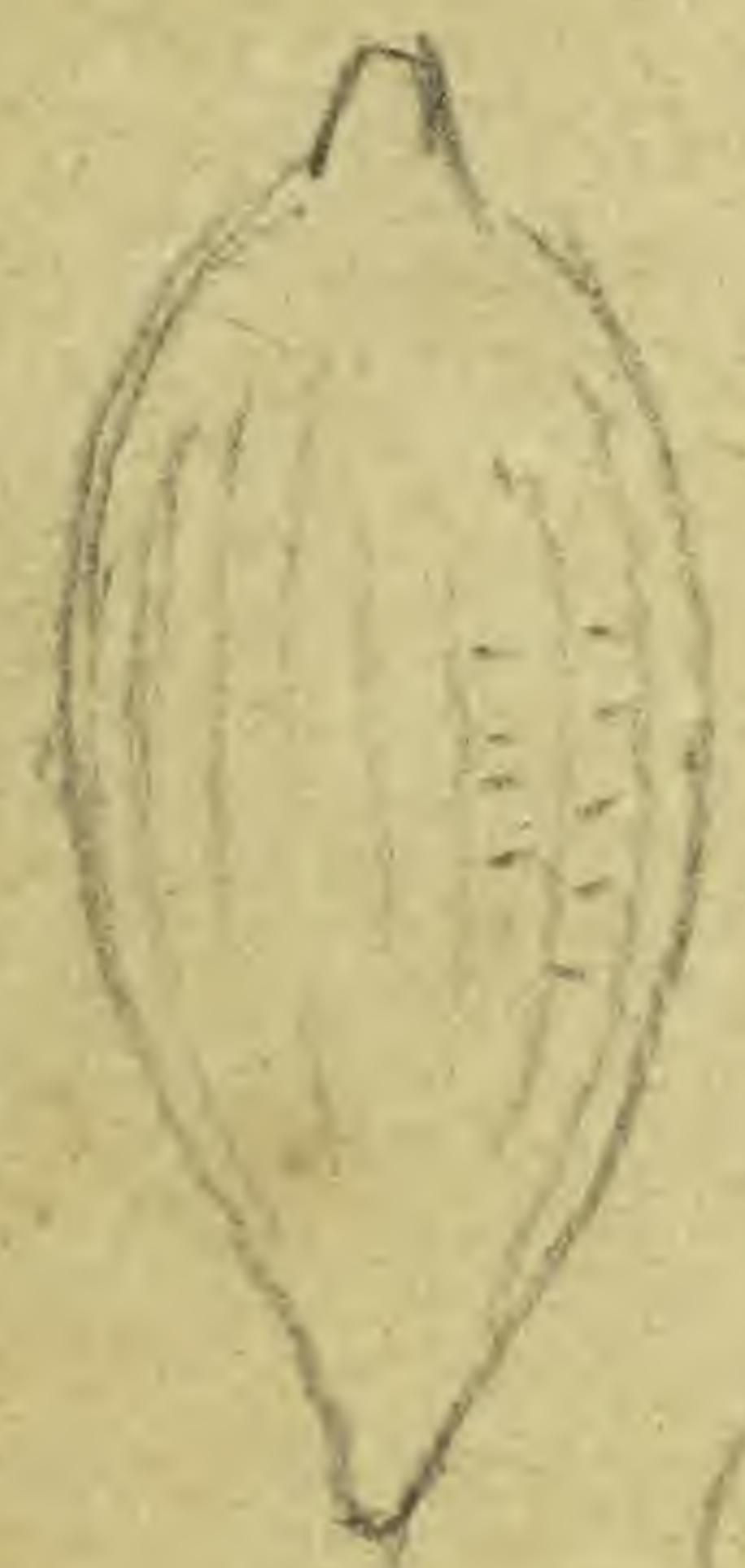
before flower



after



obli tortibus  
valve nodosa  
carpe compressa



8 April 1866

not quite ripe  
(Linoleum?)



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cm

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9846

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MUSEUM OF BOTANICAL PAPERS



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Turner

Dec 19 1866

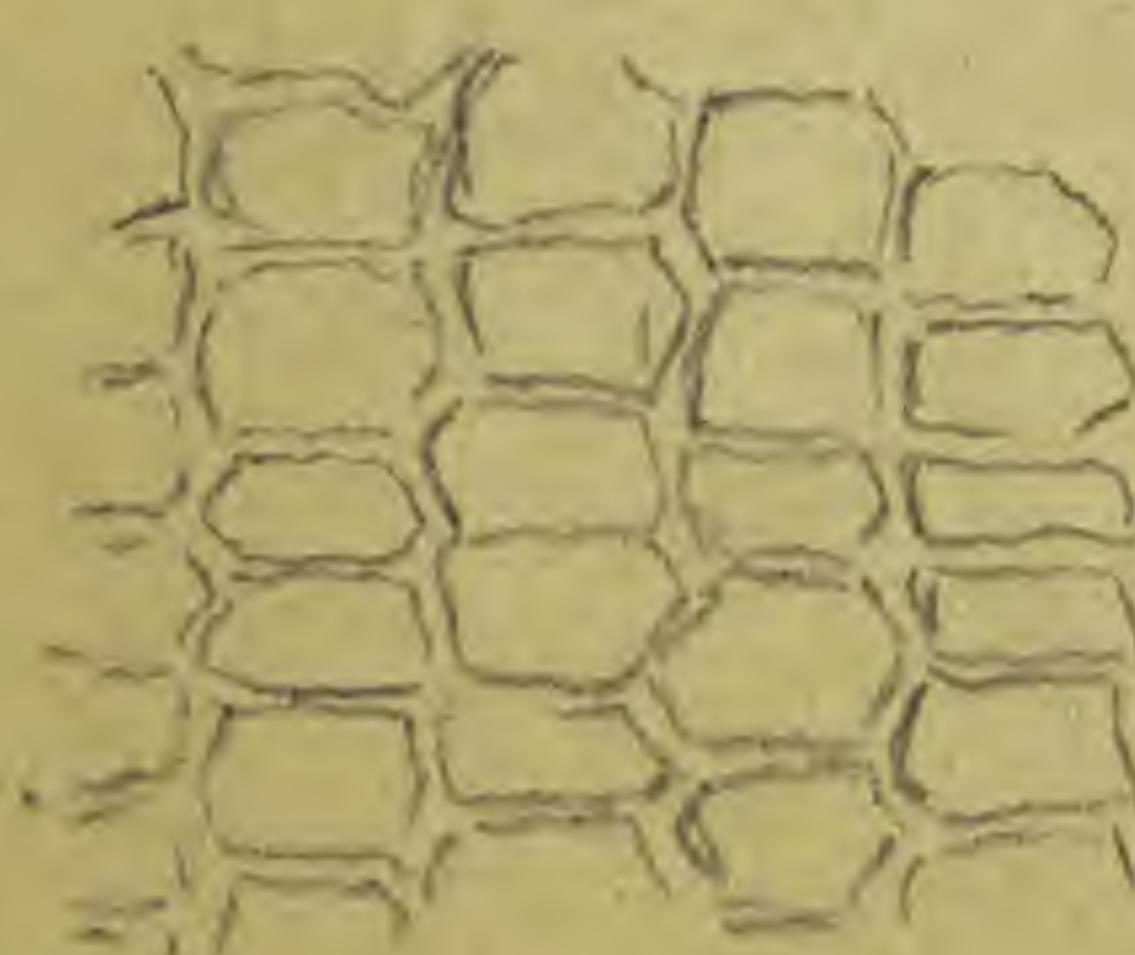
W. Schaffner 529 sub nom. *I. nodosus*

Valle d' Mexico Aug 1855

×60



above 8 mm



×150



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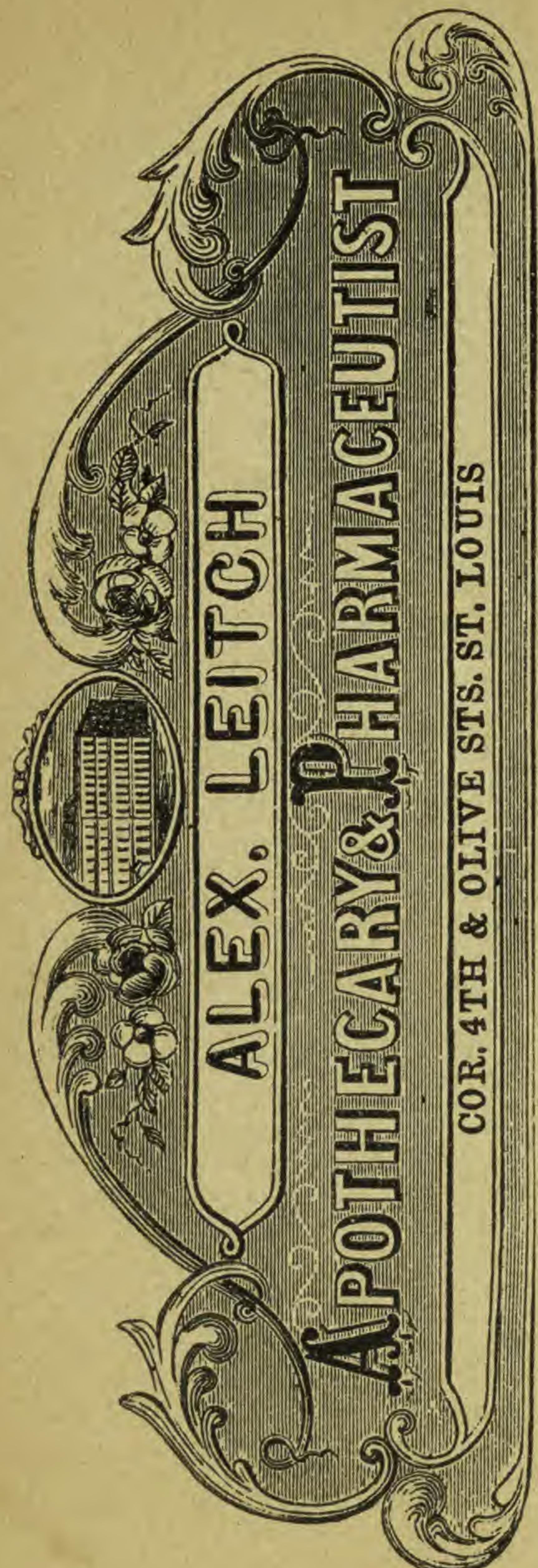
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Junco

Dec 19 1866

sub-genus *T. nodosus*

W Shaffner & L 526

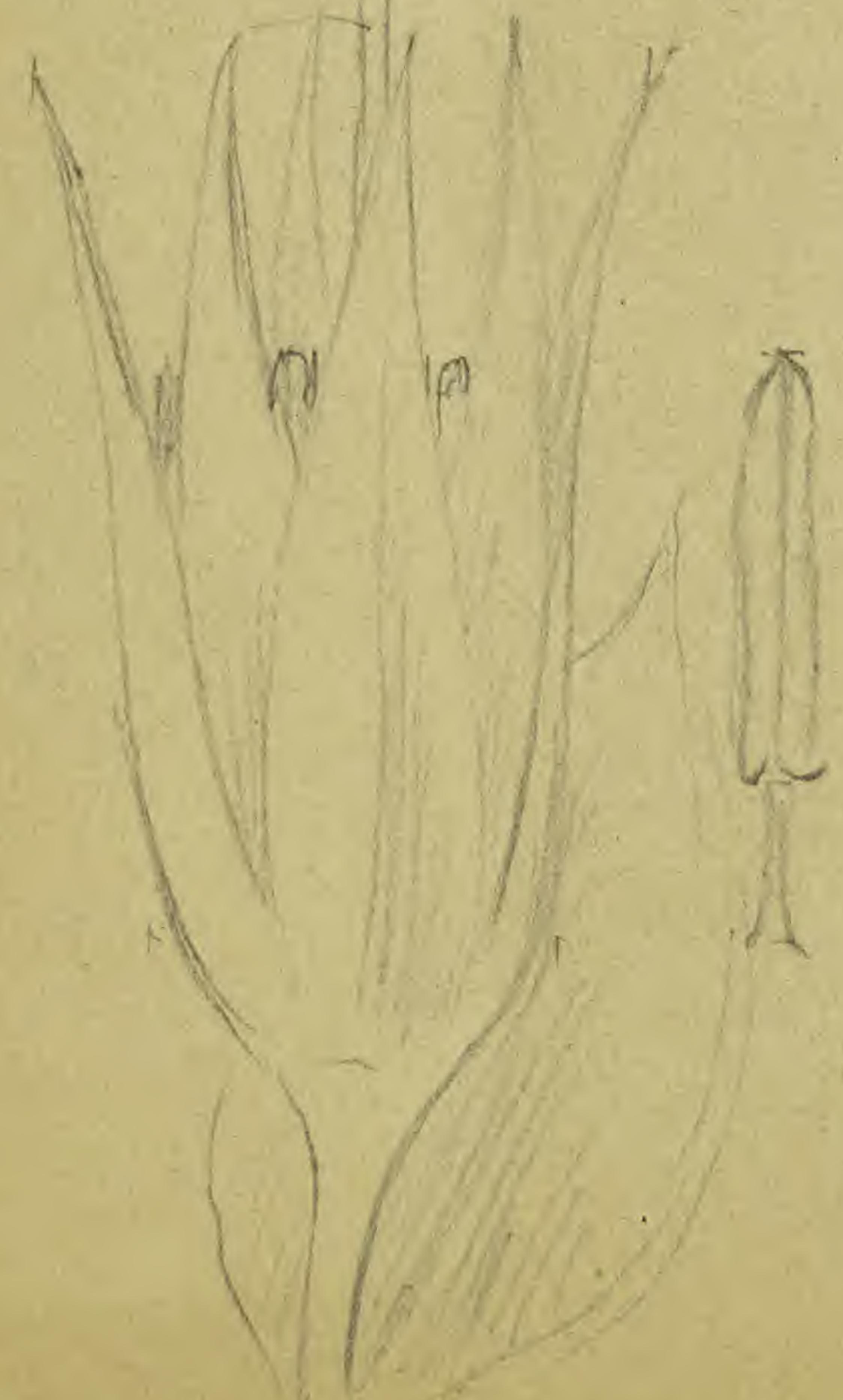
Tambaga, Mexico Aug 1855

$\times 10$

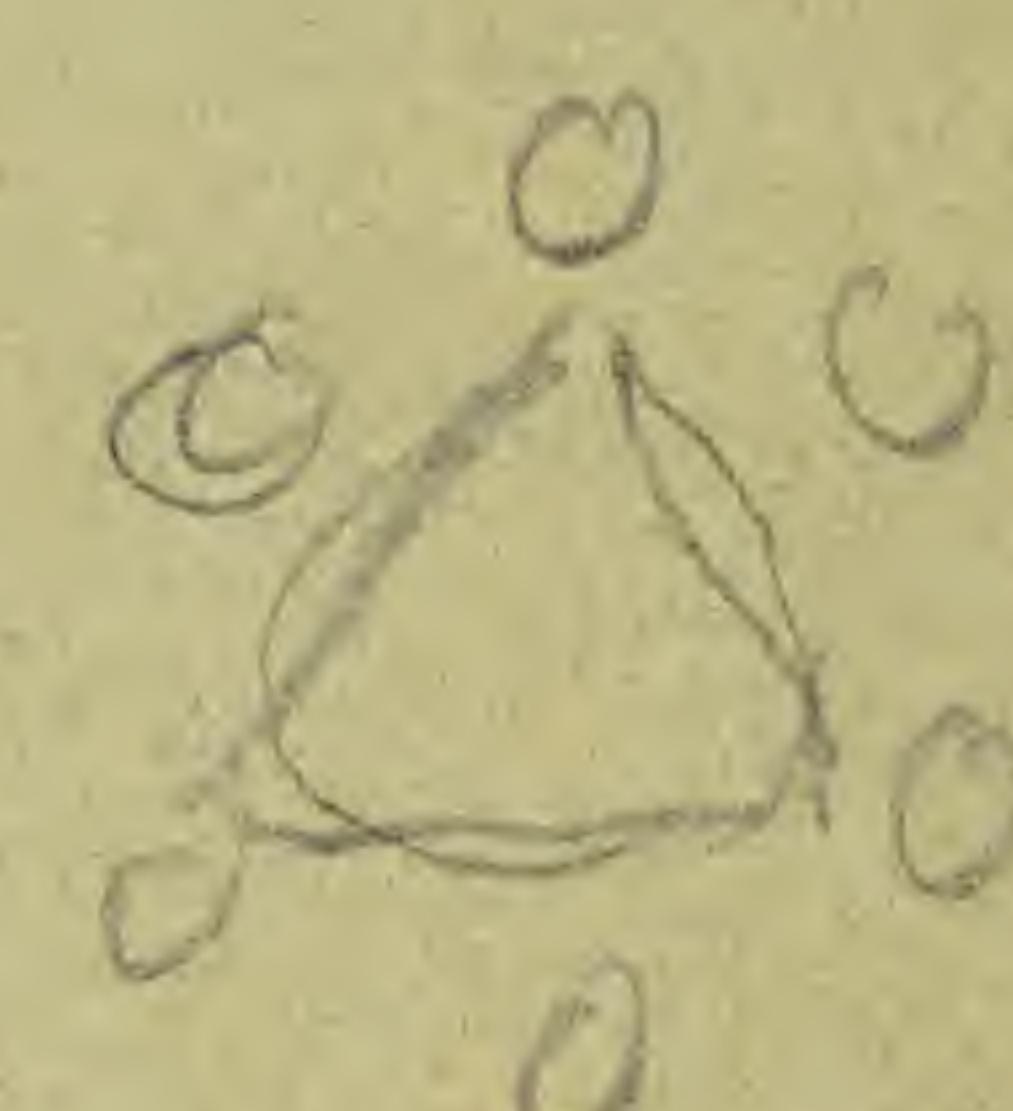
7

leads brown

10-20 flowers



very young pistil  
fruit



out of leaf  
 $\times 10$   
hollow



0 1 2 3 4 5 6 7 8 9 10

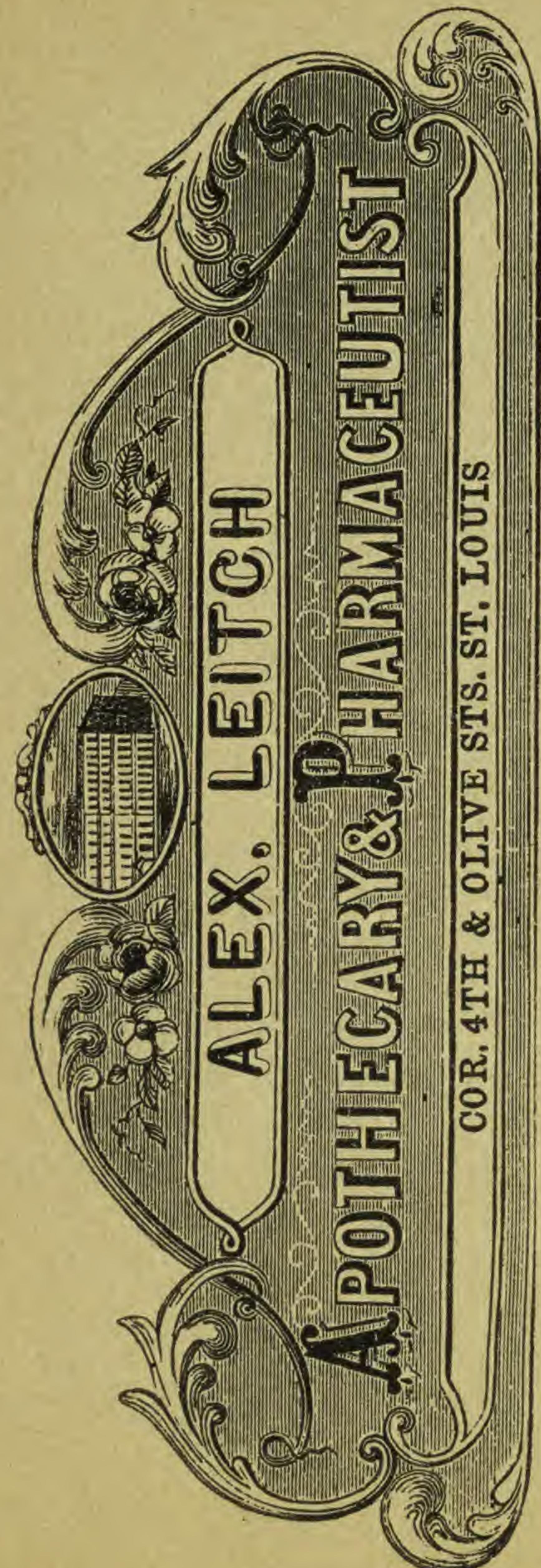
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ering.  
*Dimensions.*—Length, 0.20 of an inch; width, 0.18.  
The *Eleacrinus Kirkwoodensis* is nearly allied to *E. (Pentremites) melo*, from which it is distinguished by its much smaller size and less deeply excavated base. It also occupies a higher geological position.

Occurs in the St. Louis Limestone (Carboniferous) on the Pacific railroad near Kirkwood, St. Louis county, Missouri.

*I. phaeoceraspis*  
*Mexicanus tritifolius*  
probably distinct, the name  
*I. Mexicanus* or *I. phaeoceraspis*  
fol. test - rugosa  
sept. Crateris - cancellat  
caps. large acuminate.

8



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6486

ee  
ec-  
ind  
wma  
trinervit Liebm  
under co  
cumstances prevented me from obtaining more than a few crystals, which are now deposited in the collection of the Smithsonian Institute; a few others are also in the hands of members of the party. We were travelling at the time by forced night marches with nearly worn out animals, seeking to gain a spring of water in a distant range of mountains. This desert was then entirely unexplored. I have but little doubt that more interesting materials are to be found at the same point.

The mountains of the former Territory of Utah promise a rich yield to the mineralogist. We know already of gold and silver ores in the east, west and south part of that district; of copper and lead ores in the south, and I have discovered the latter also in the centre of it; of specular iron ores and native sulphur in the Rocky Mountains and near Little Salt Lake; of rock salt in the mountains south-east of Utah Lake; of native alum near Salt Lake; of various other salts in the deserts; and of silicates, composing the granites, porphyries, diorites, trachytes, and lavas, nearly over the whole area.

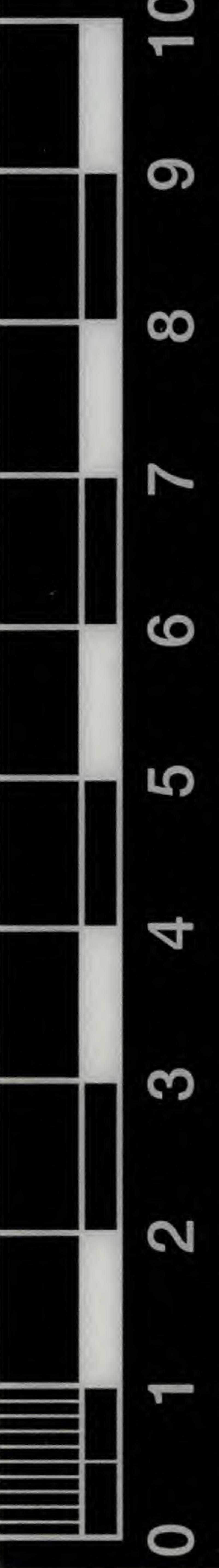


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8-208

118

TRANS. OF THE ACAD. OF SCIENCE.

interrupted descent and ascent took place from January to December, we find in 1862 some interruptions in the steps of that ladder. The electricity in February, 1862, is about four degrees higher than that of January, April somewhat higher than March, and July is the lowest instead of September in 1861. These trifling irregularities may be accounted for by differences in temperature and relative humidity, and by a greater number of thunderstorms in 1862. January of 1862, for instance, was so unusually rainy, that its relative humidity too was unusually high, diminishing thus electricity. But the general features of distribution of electricity throughout the year are apparent in both years, and we may in that respect divide the twelve months of each year into two or three groups. Computing the months which give the highest electricity and those which give the lowest in each year, we find that in both years the months of January, February, March, April, November and December exhibit the highest, and the months of May, June, July, August, September and October the lowest electricity. The first group gives

The aggregate monthly mean of 71.5 degrees of electricity in 1861 and 74.6 " " " 1862

While the second group gives 29.0 " " " 1861

and 25.7 " " " 1862

The second group prevailed therefore in 1861, and the 1st

trinervis Liebm.  
under capituli

## WISLIZENUS—ATMOSPHERIC ELECTRICITY.

117

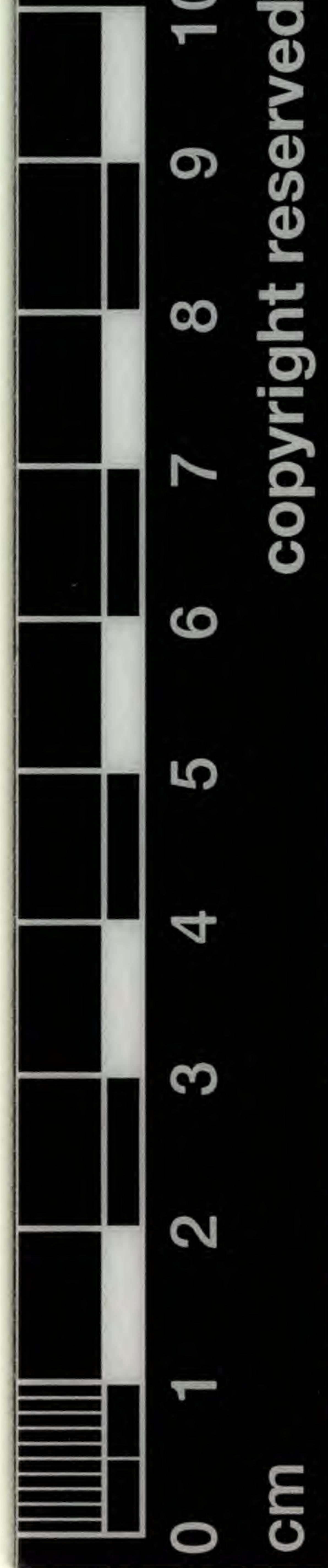
VI. The appearance of negative electricity was connected in

1861. No. times.	1862. No. times.	
30	32	with thunderstorms.
23	28	with rains without thunder and lightning.
20	4	with dry storms (without rain and without thunder and lightning).
4	3	with snow.
1	0	with fog.
<b>78</b>	<b>67</b>	

VII. *Relation of Rain and Snow to Electricity.*

Rain without thunderstorm was accompanied

	By Positive Electricity.		By Negative Electricity.		By no Electricity.	
	In 1861.		In 1862.		In 1861.	
	7 .....	5 .....	3 .....	2 .....	.....	2 .....
January.....	7 .....	5 .....	3 .....	2 .....	.....	2 .....

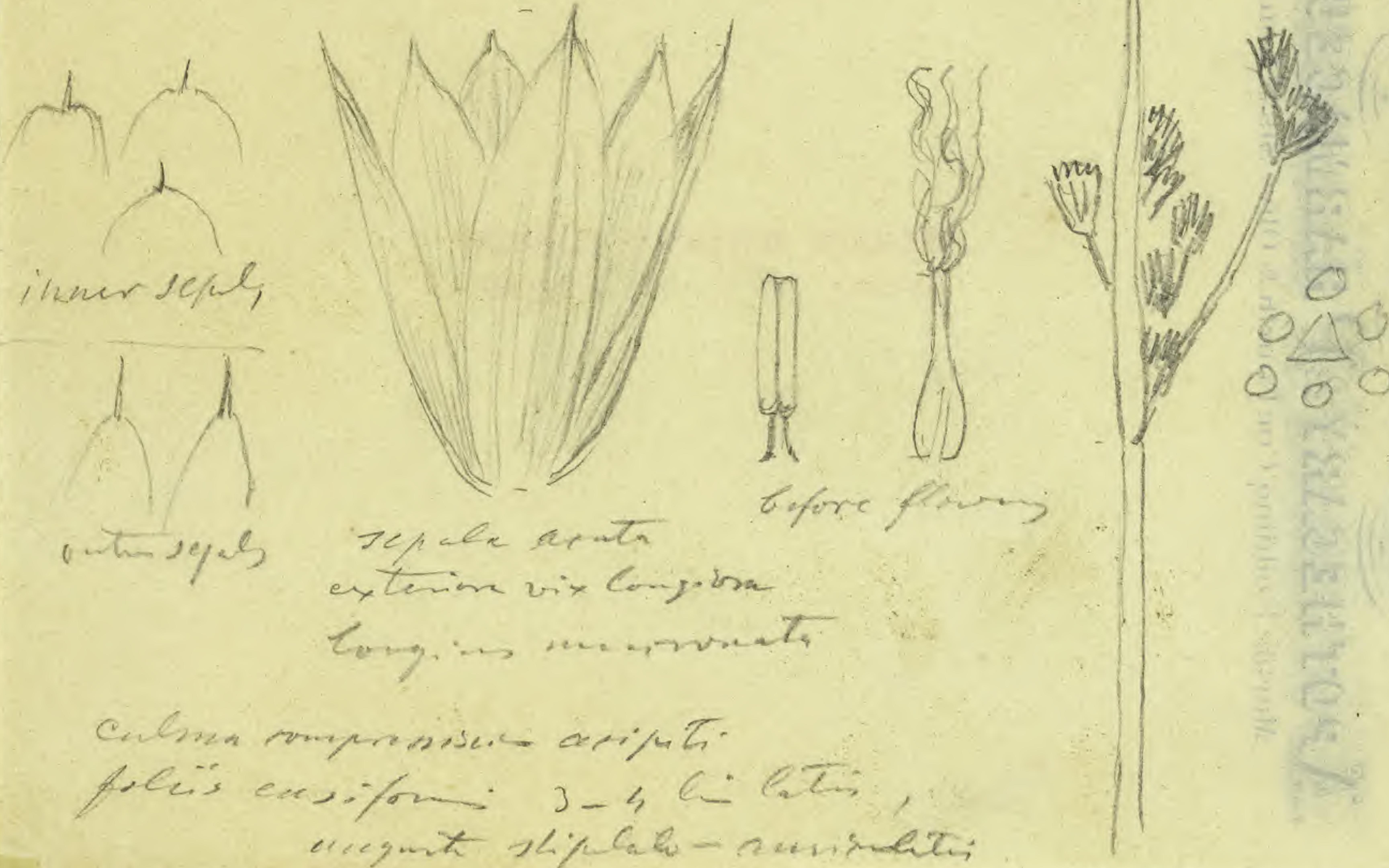


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*Ionurus phaeocephalus*,  
*s. paniculatus*,  
Napa valley, Calif. S. Bigelow  
- H. Gray

Oct 23 1865

$\times 10$



Culma compressa exaristis  
foliis cusi-formi 3-4 li lati,  
acutis stipulis - auriculis.



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cm

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2340 *Juniperus phoenicea*  
Bolander No 4

Jan 6 1866

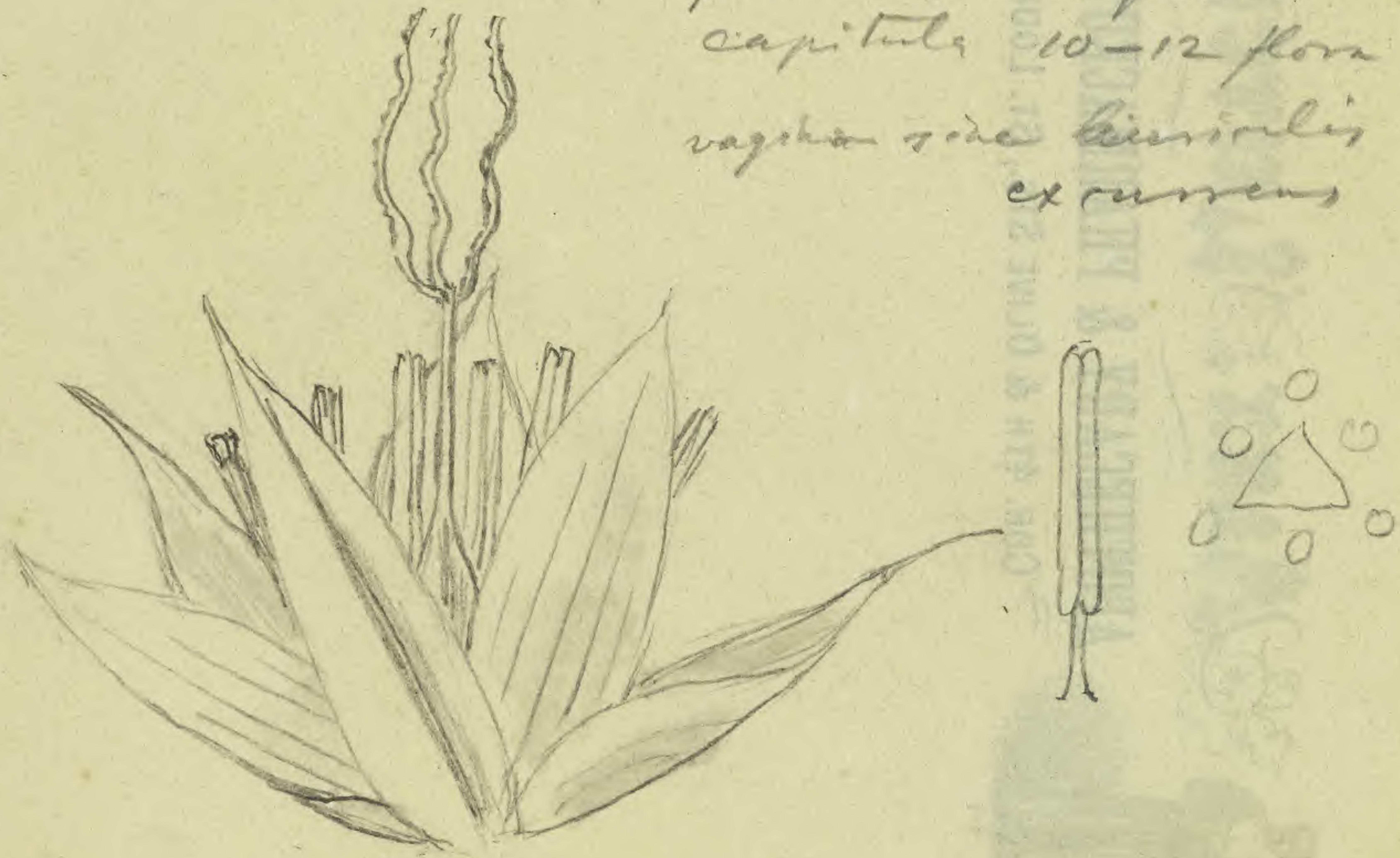
*S. pumila*

(*Juniperus nullis*)

panicle composite

capitula 10-12 flora

vaginæ 3-4 linearis  
excurrentes



spike : terminal alternate, pale brown.



0 1 2 3 4 5 6 7 8 9 10

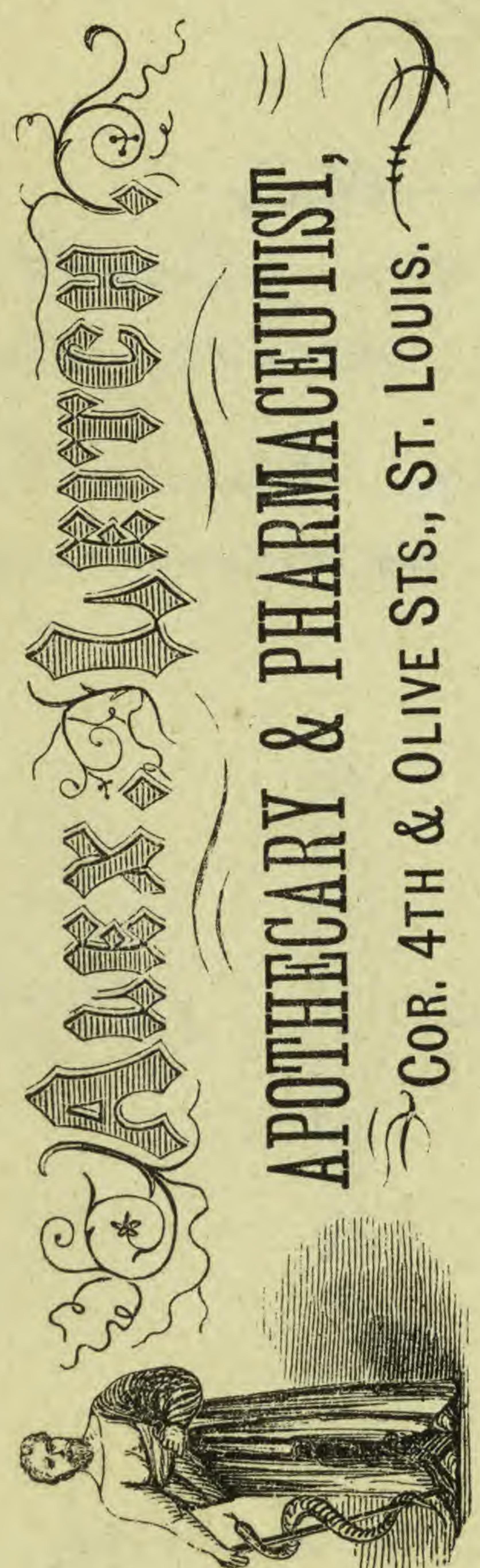
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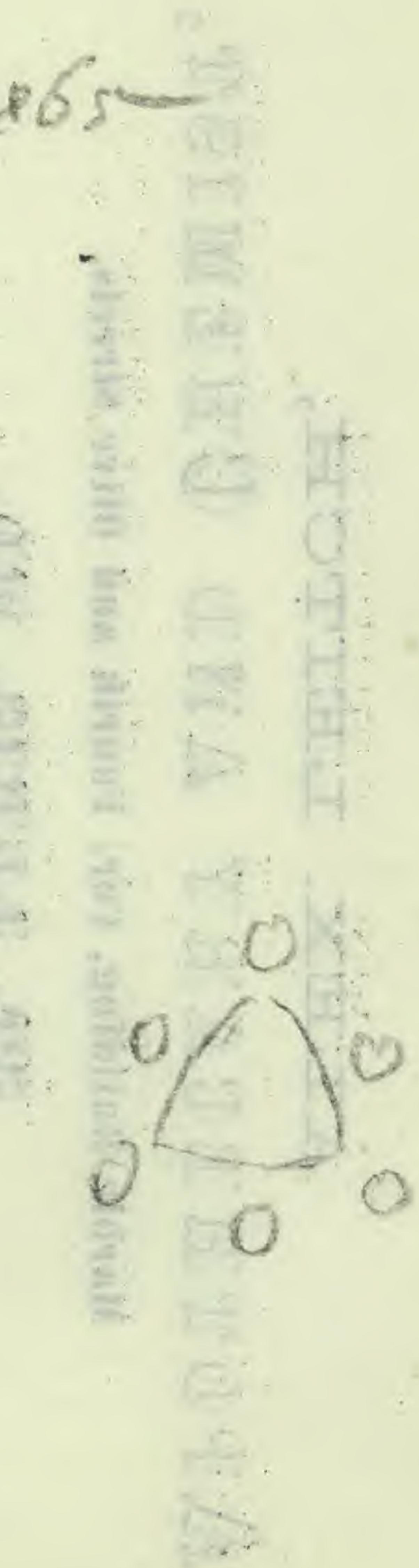
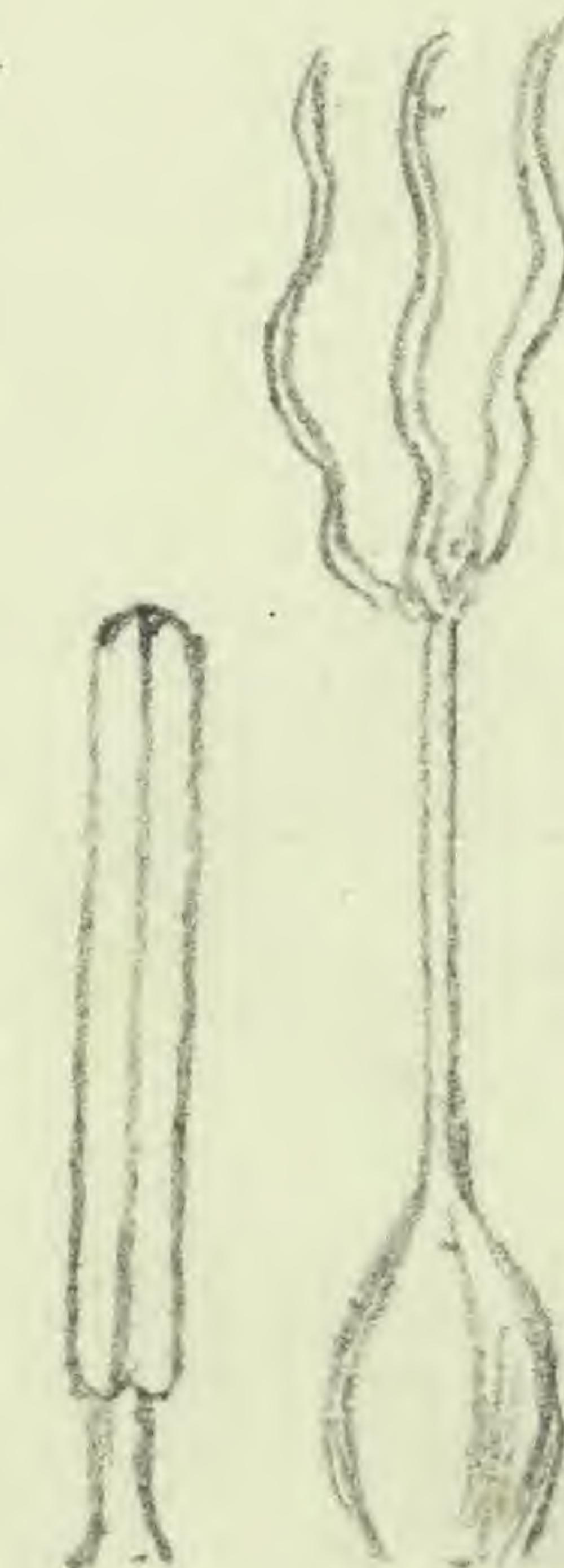
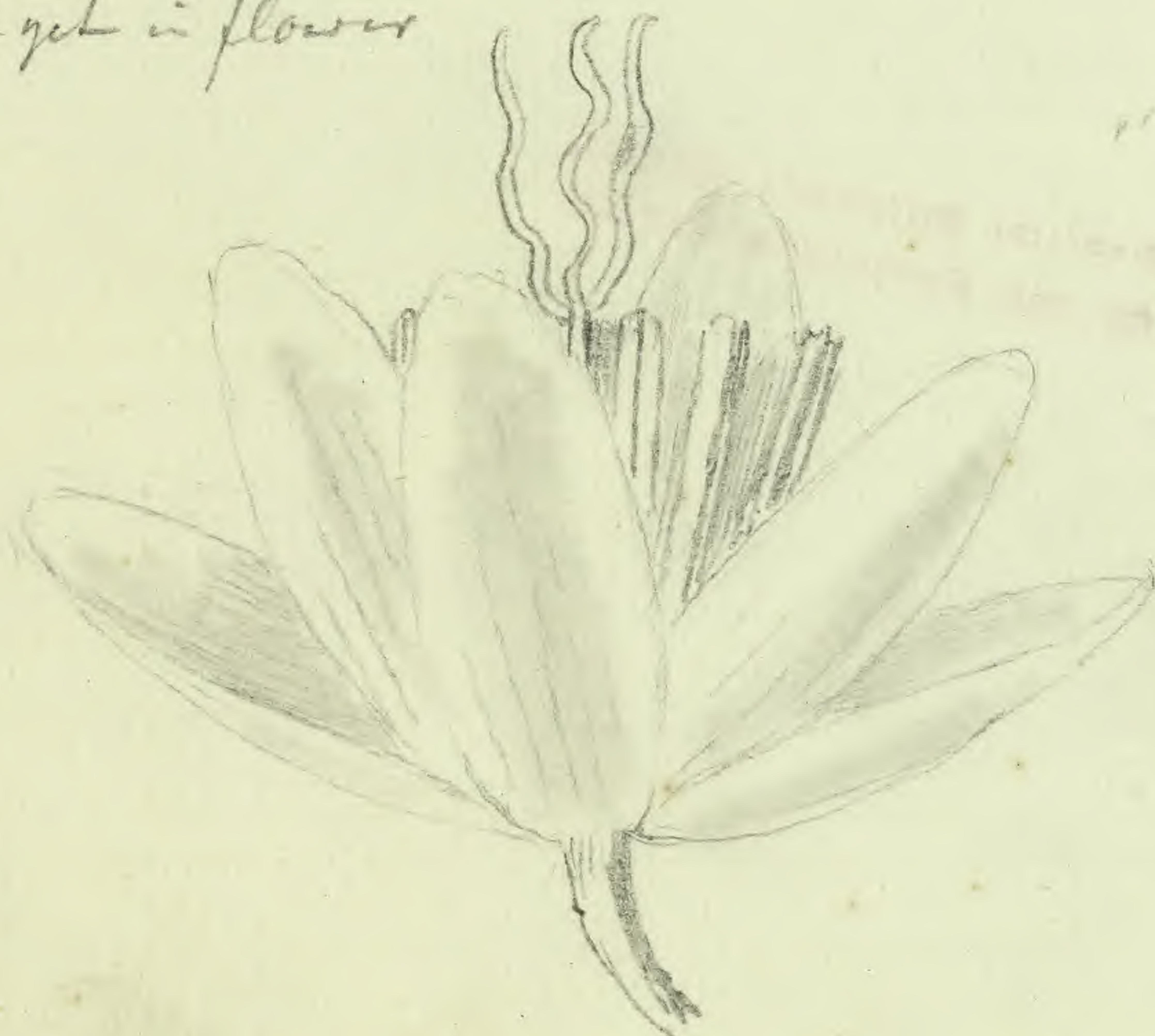
13. *Tammaris*

March 22 1866

near Carson City, Nevada

C. L. Anderson 1865

not yet in flower



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cm

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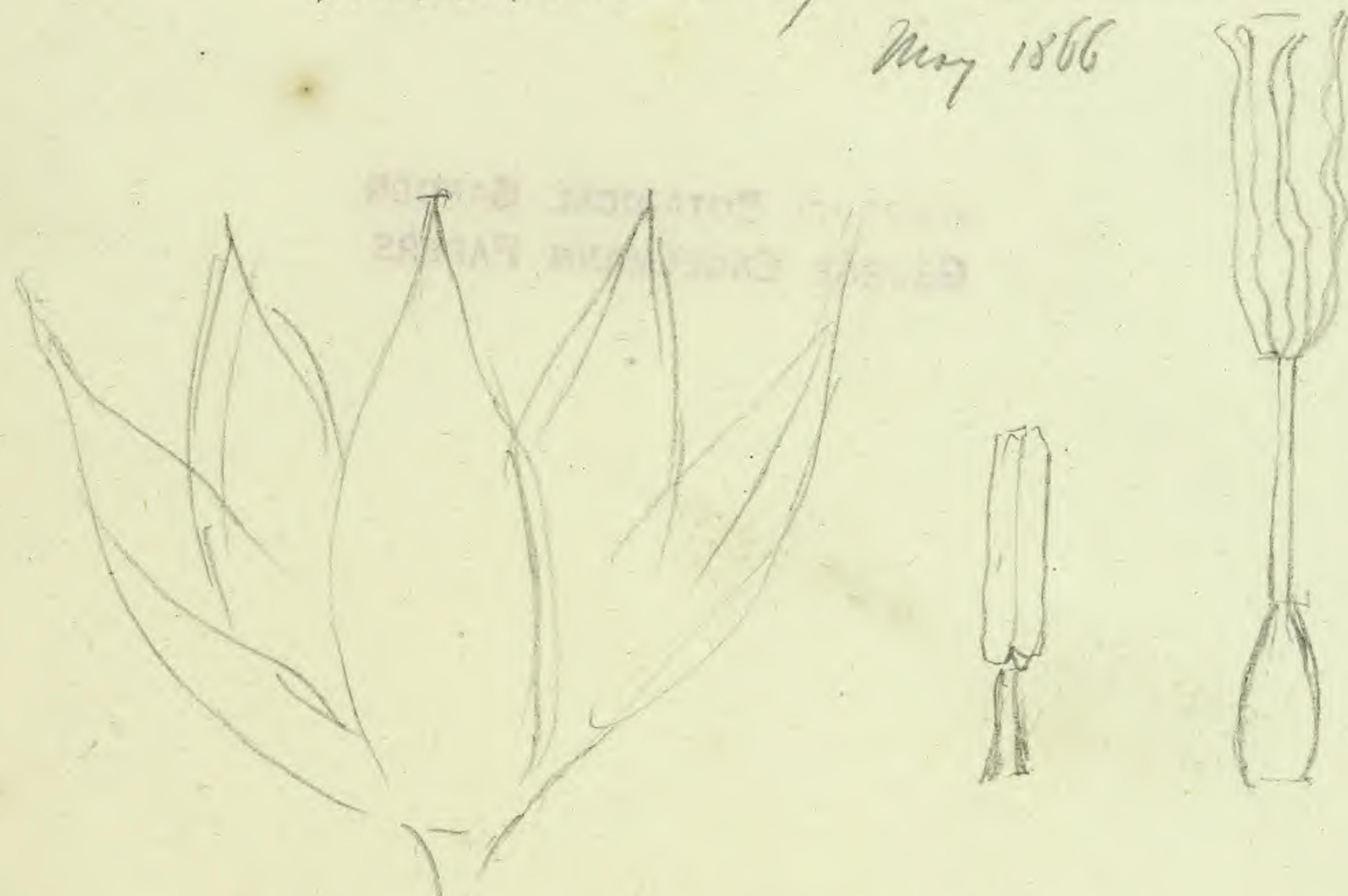
4769

*J. phaeomphax*

July 26 1867

Mendocino Co. Calif

May 1866



0 1 2 3 4 5 6 7 8 9 10  
cm

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9854

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31½

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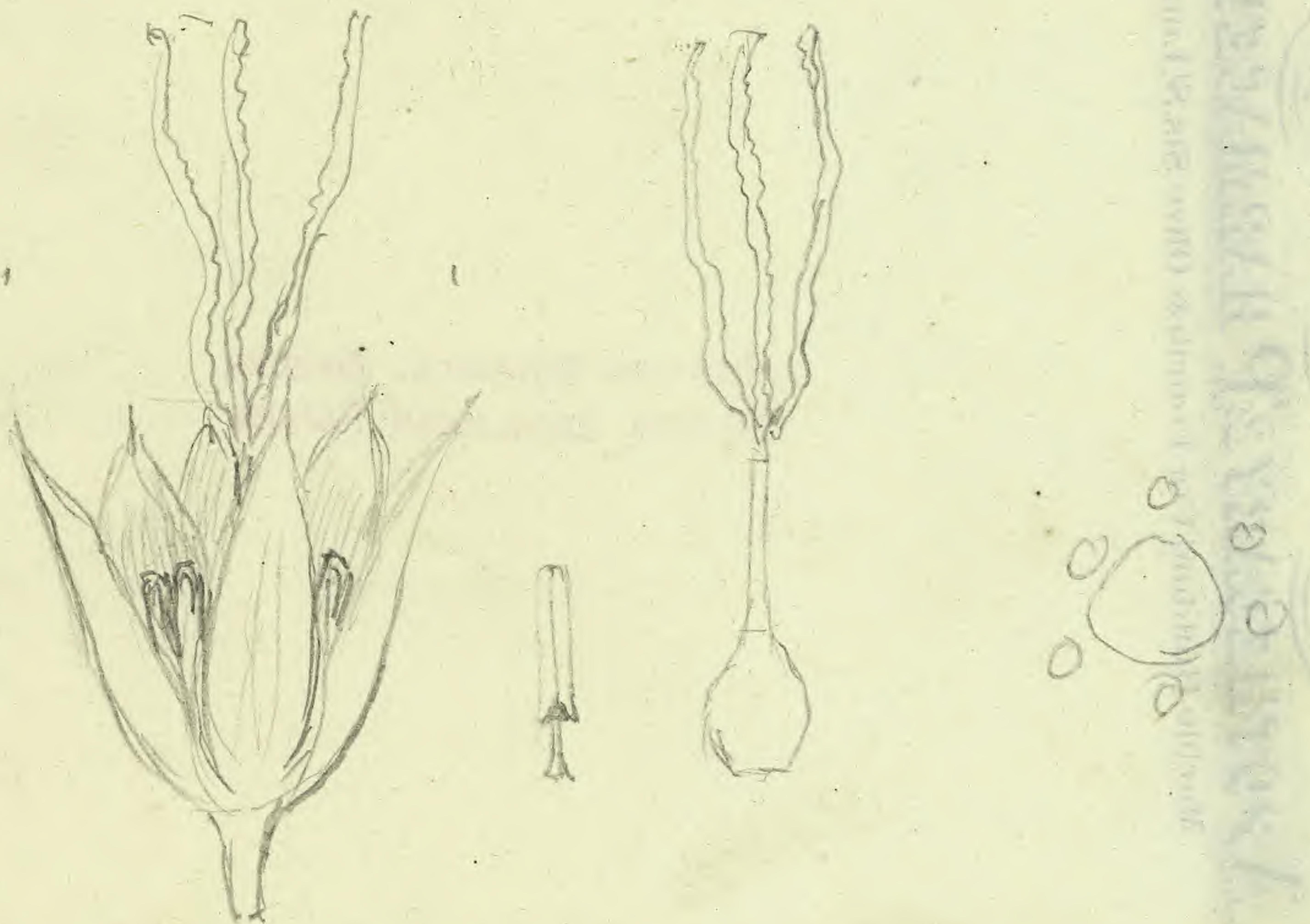
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6036

*I. phaeocystis*

Jun 27 1867

Yosemite Valley, # Boland Jun 1867



0 1 2 3 4 5 6 7 8 9 10  
cm

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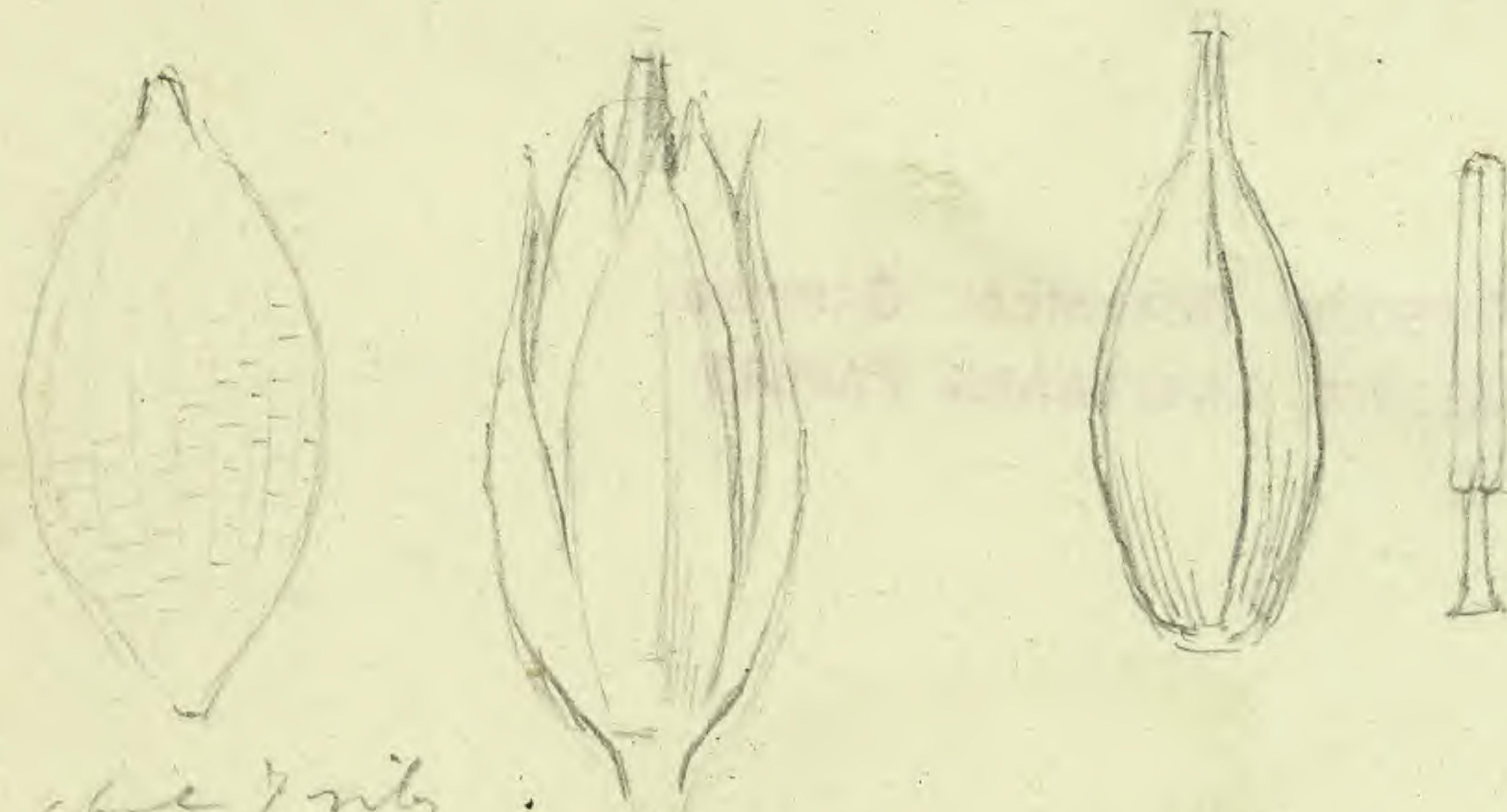
6006

*I. phaeophyllo* paniculatus July 28, 1867  
wbyash oxygen??

Alpine meadows, Sierra Nevada 9000'

H. Bolander Sept 1868

10-12 inches high



and 7 ribs

see 10 ribs

*I. Phaeophyllo* fl. and ribs  
capsula part. exserta



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cm

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
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cm

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*Tanacetum brevifolium* Lich.

Chimborazo 7000' May.

ex H. H. B. Haga

as H. M. P. Pini

plant undeveloped.  
reproductive panicle  
consisting of several  
(yet very small) heads



0 1 2 3 4 5 6 7 8 9 10

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*J. brevifolia*, Liebm.

Dec 24 1866

N. 532. Wlh. Schaffner, Val di Messico in Cottis  
montosiss purple flowers

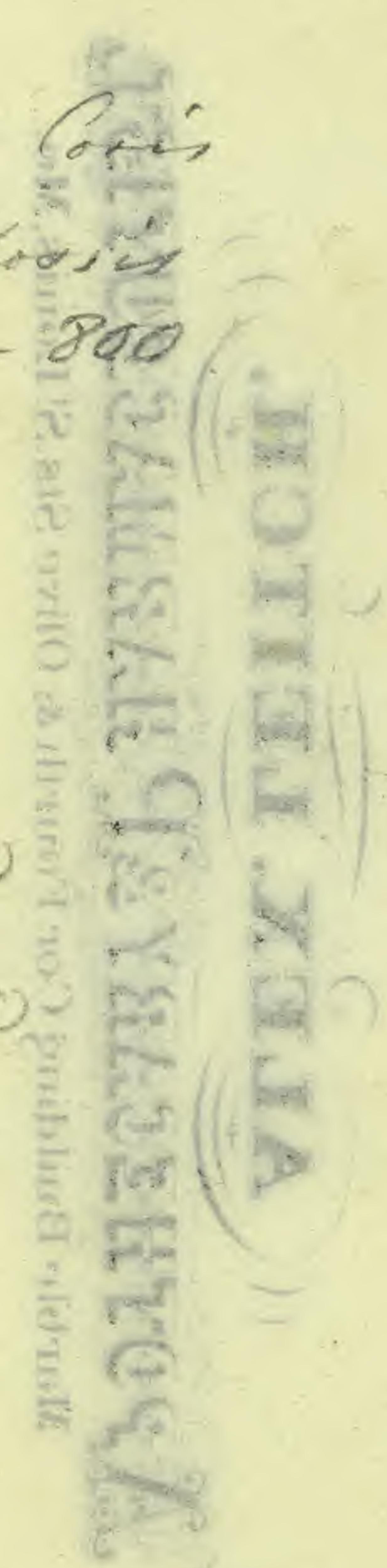
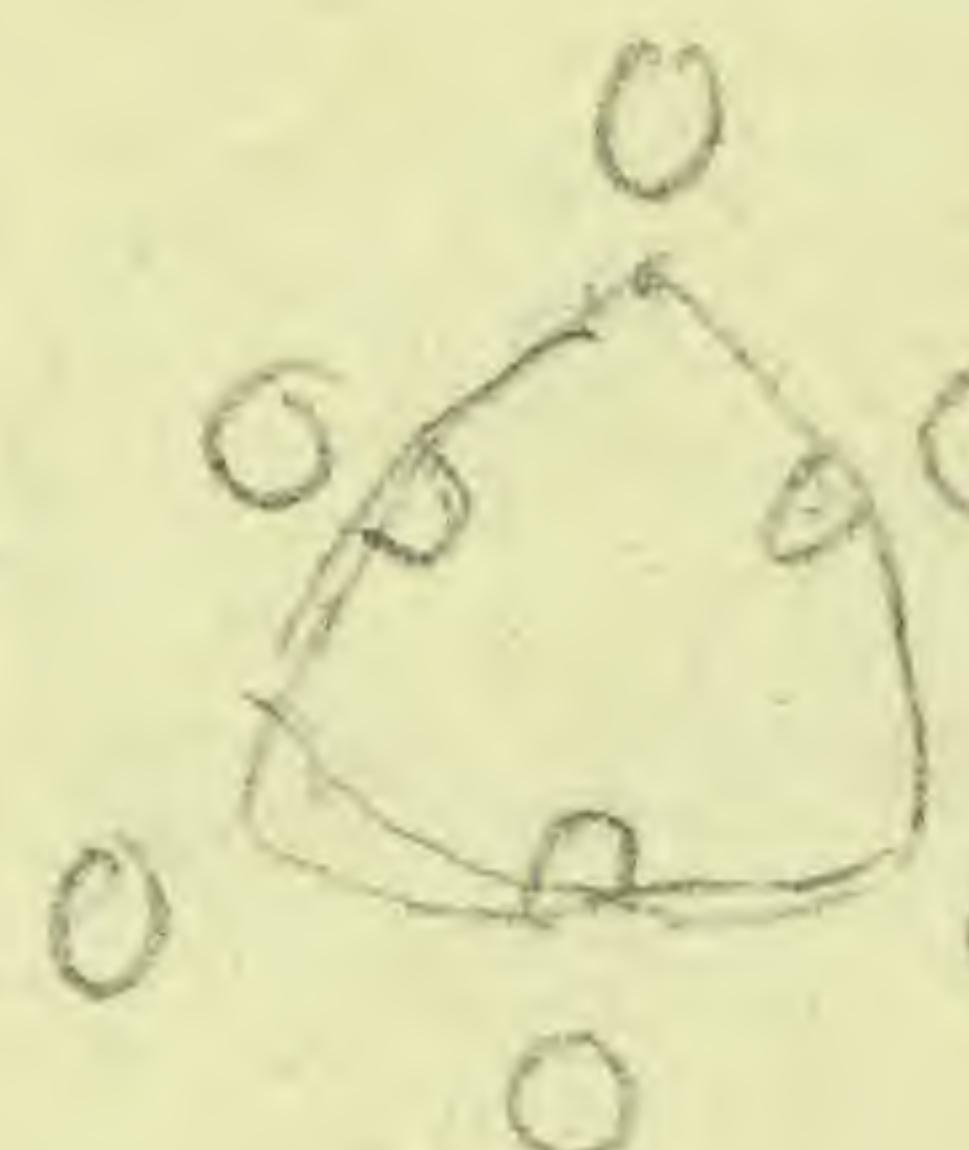
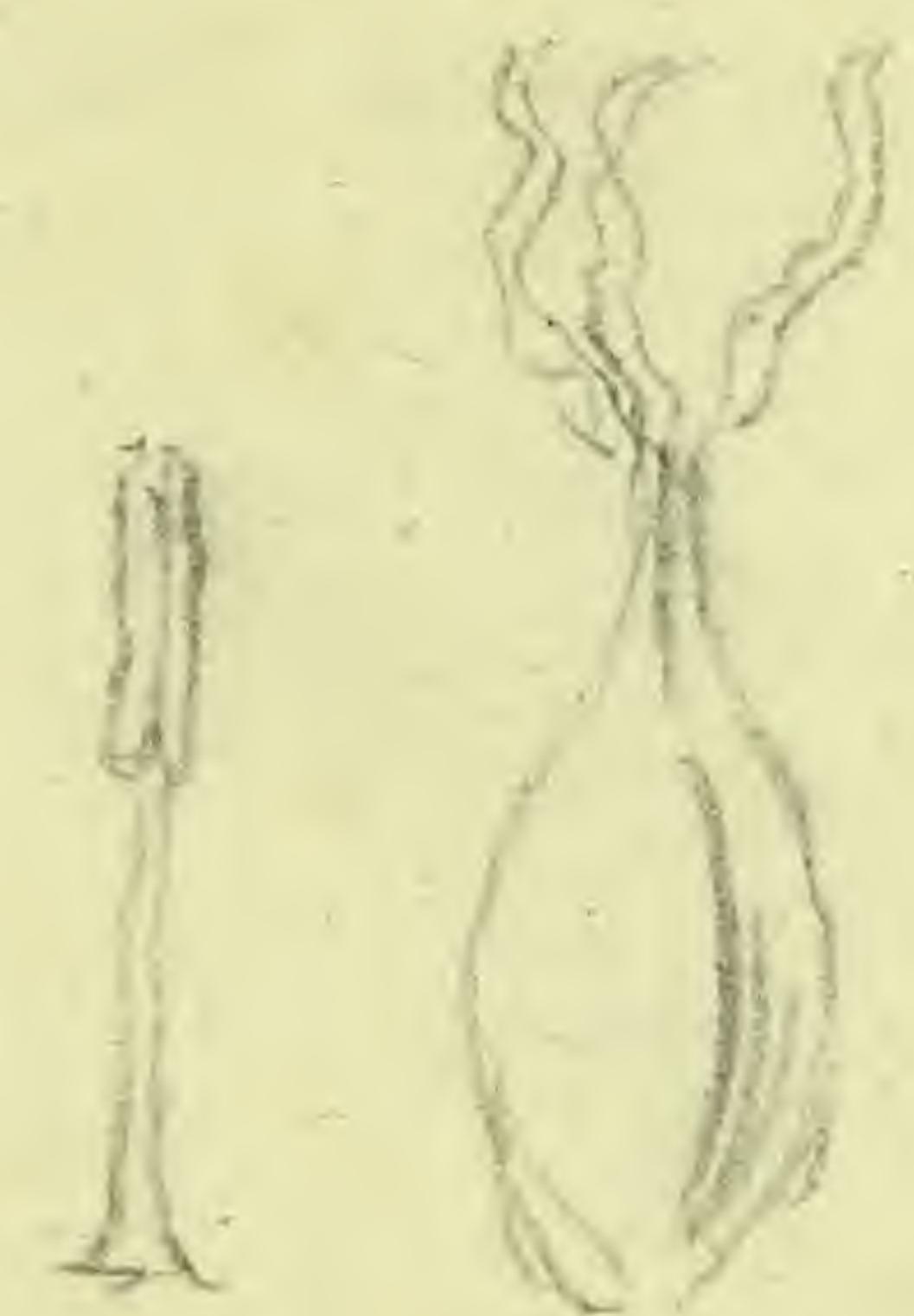
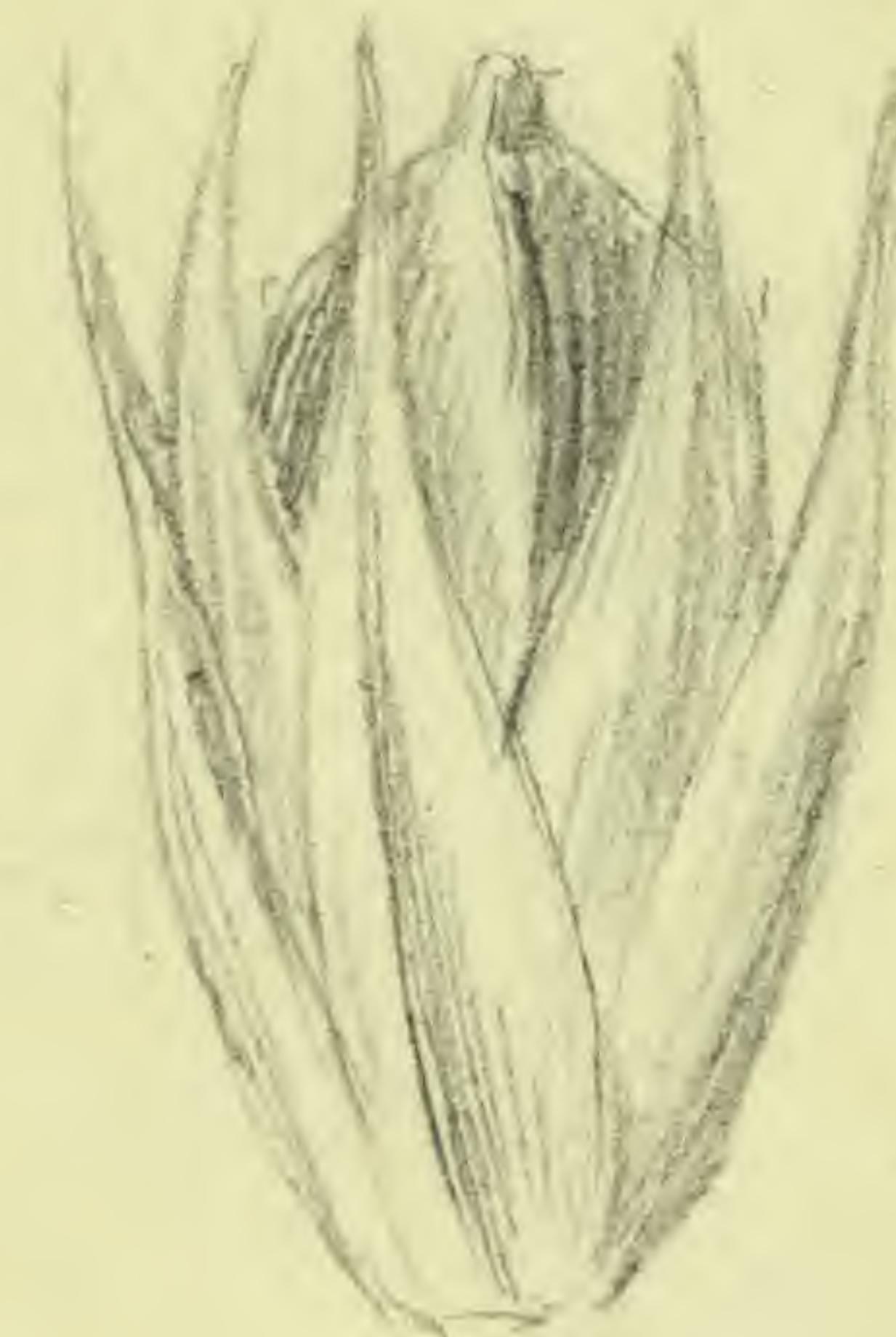
alt 800

Aug. 1855

×60



purple



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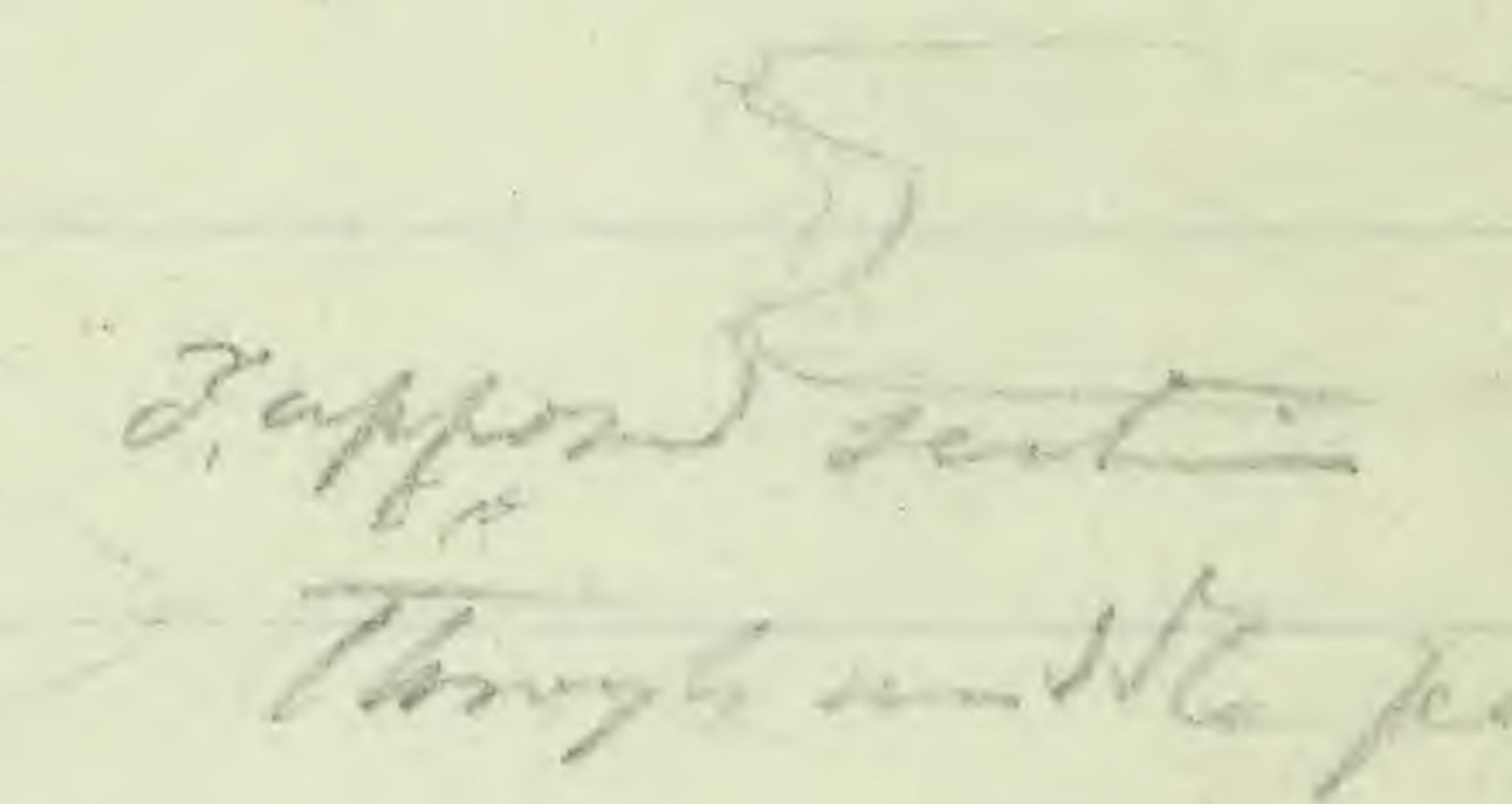
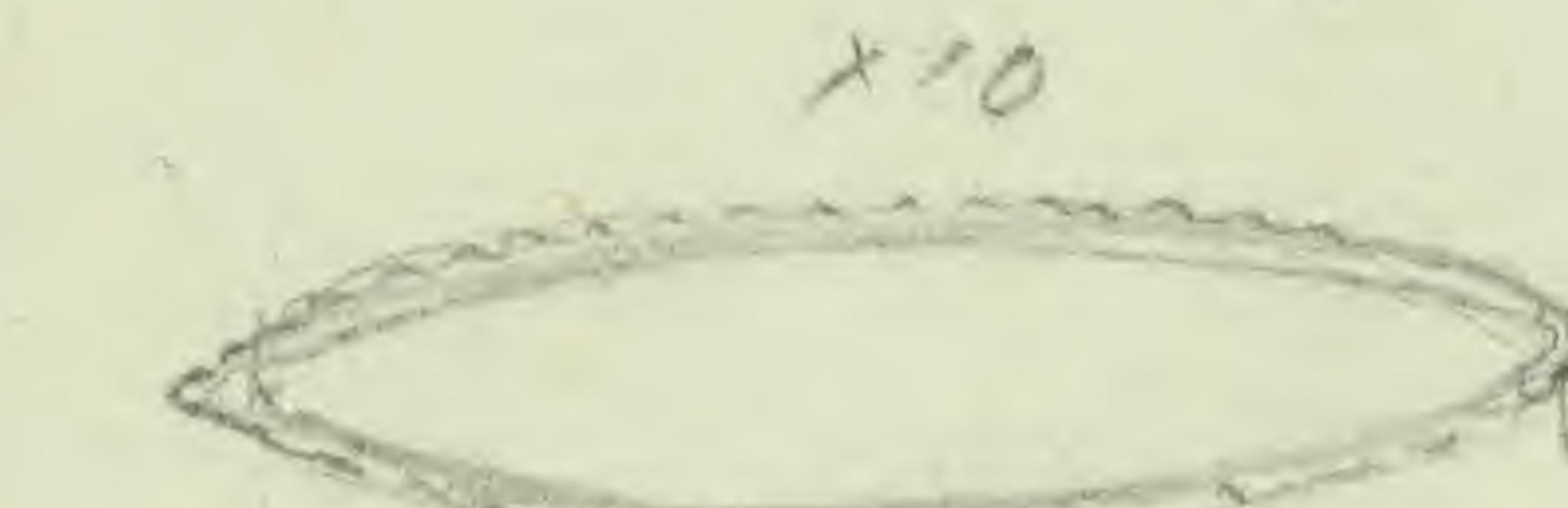
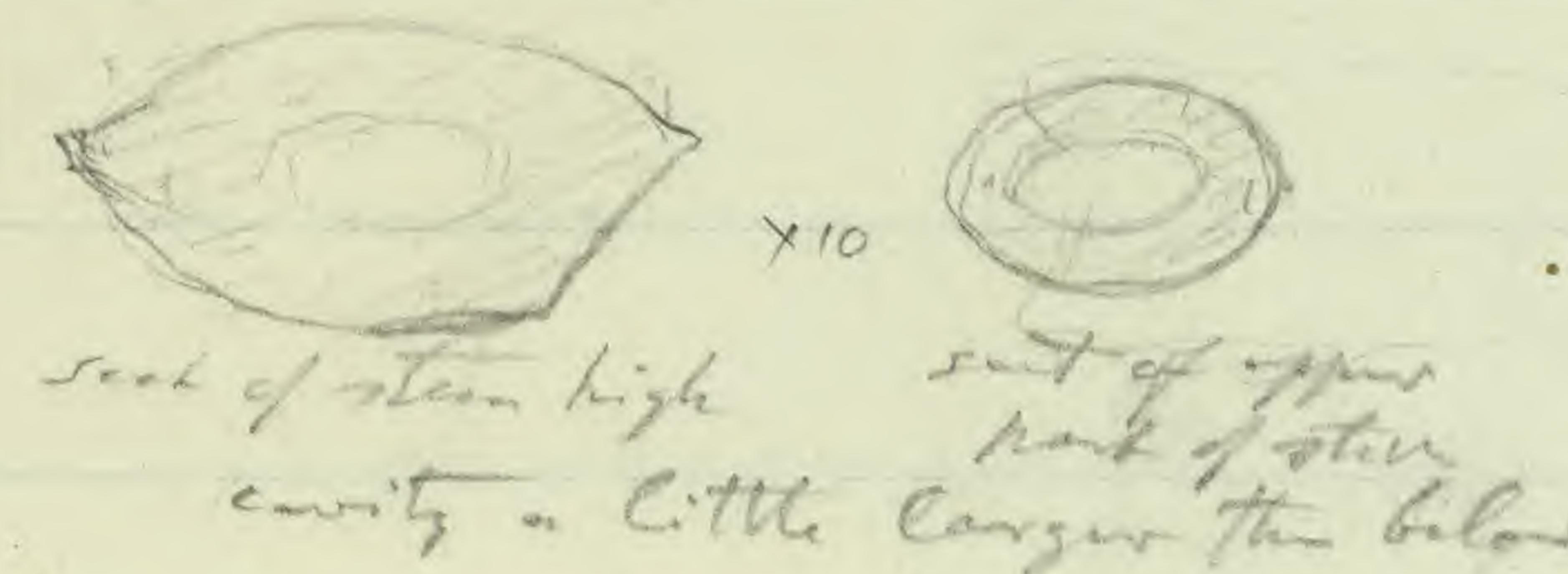
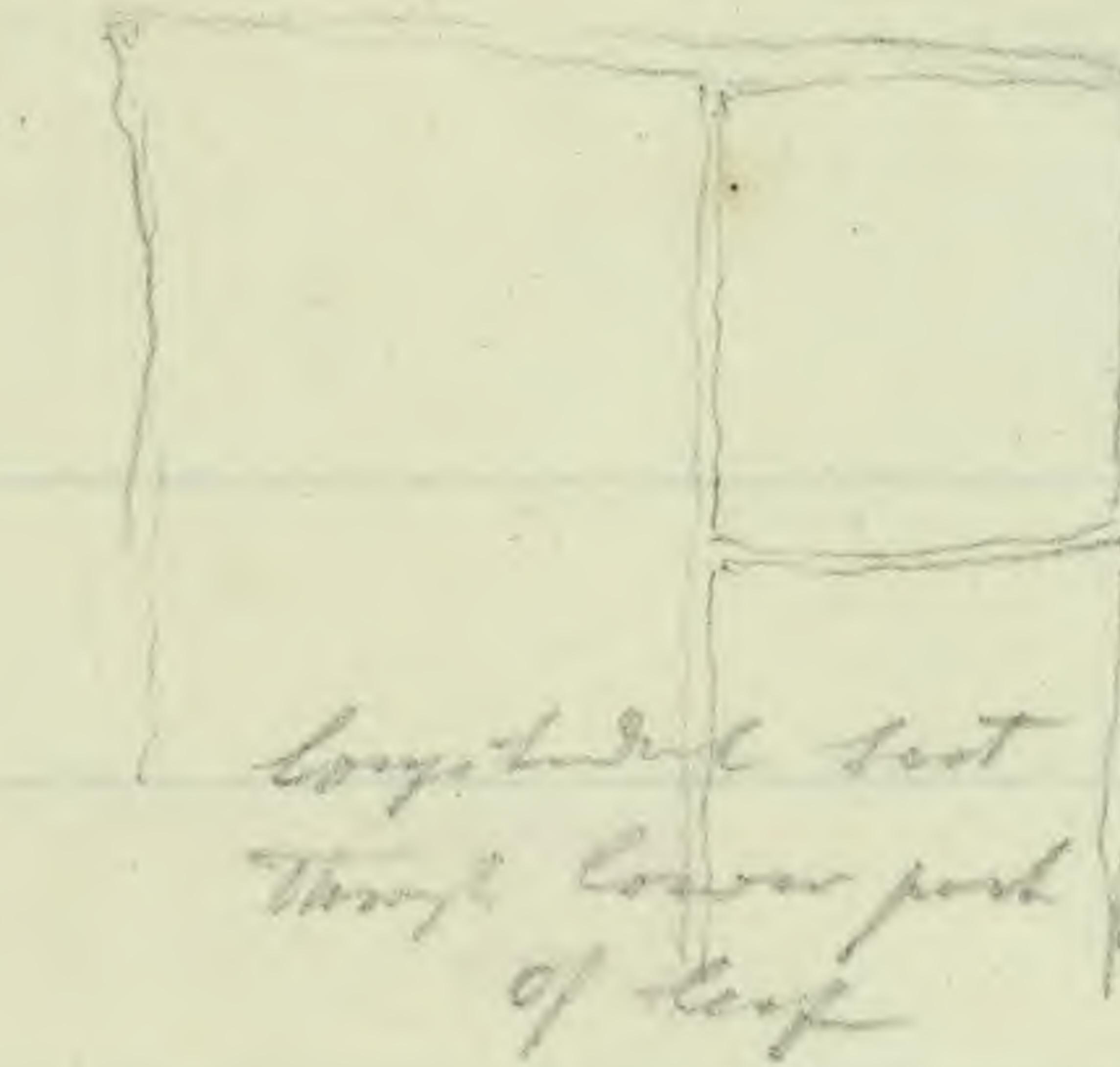
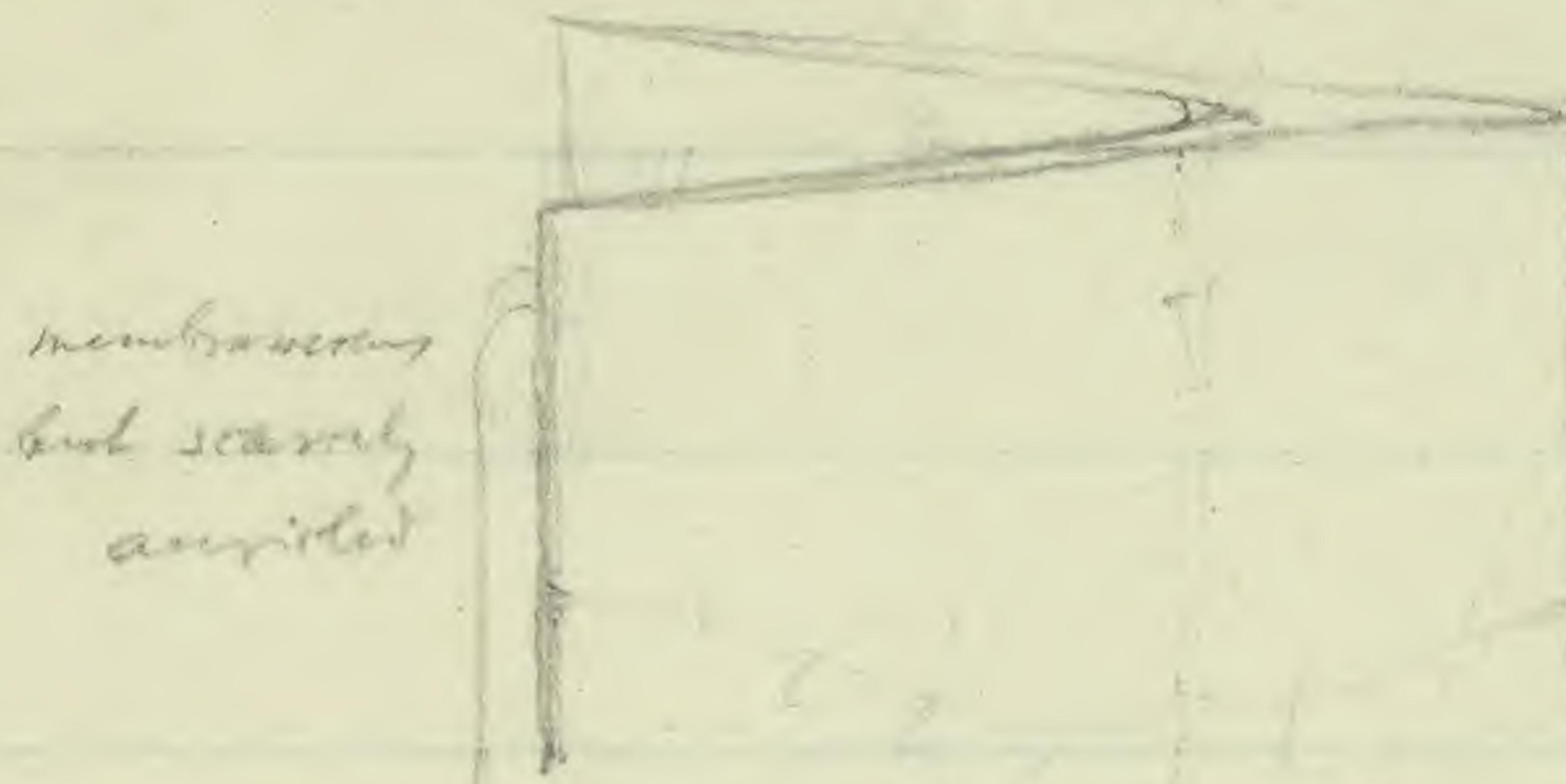
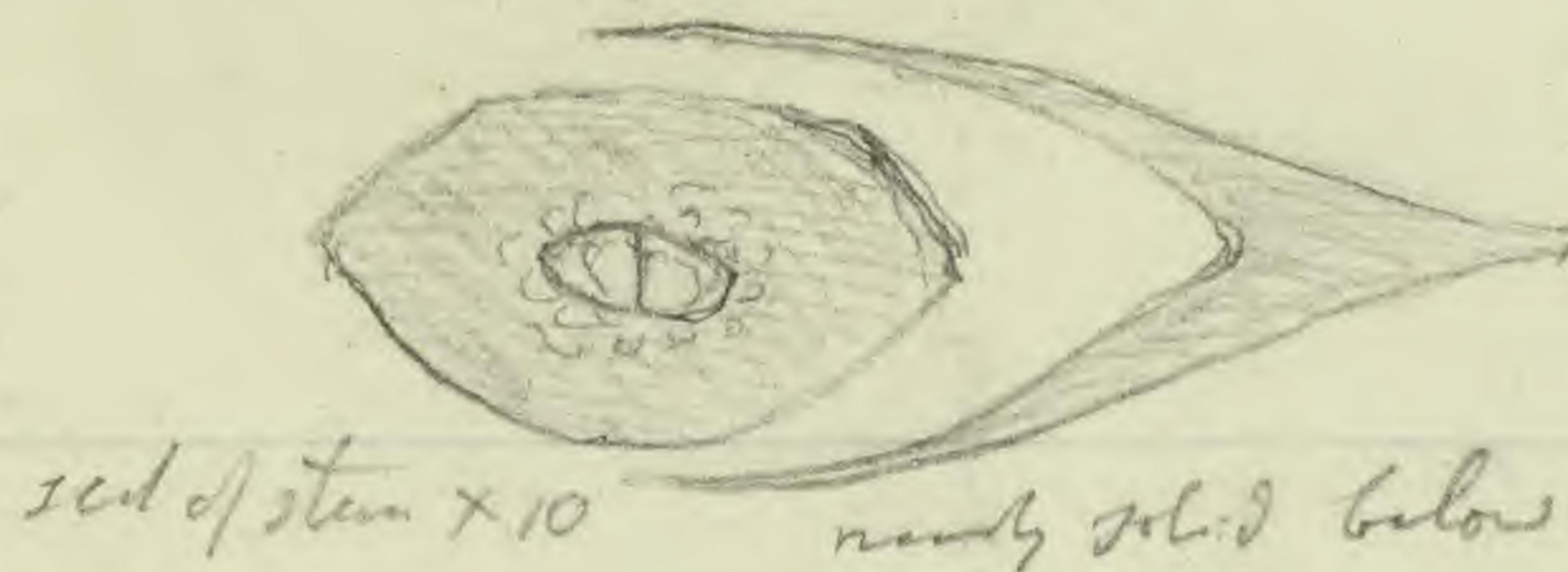
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*Succowia xiphioidea*, on Grand River, Hot Sulphur Springs Aug 2 1880



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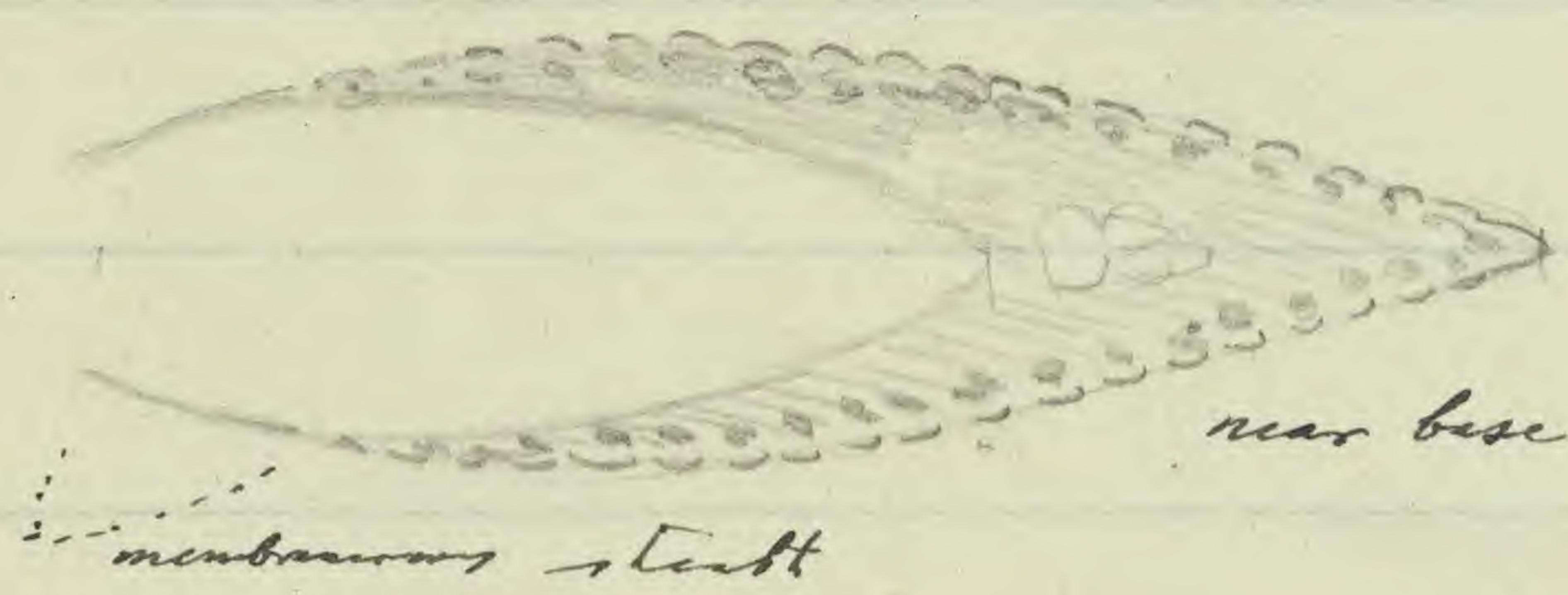
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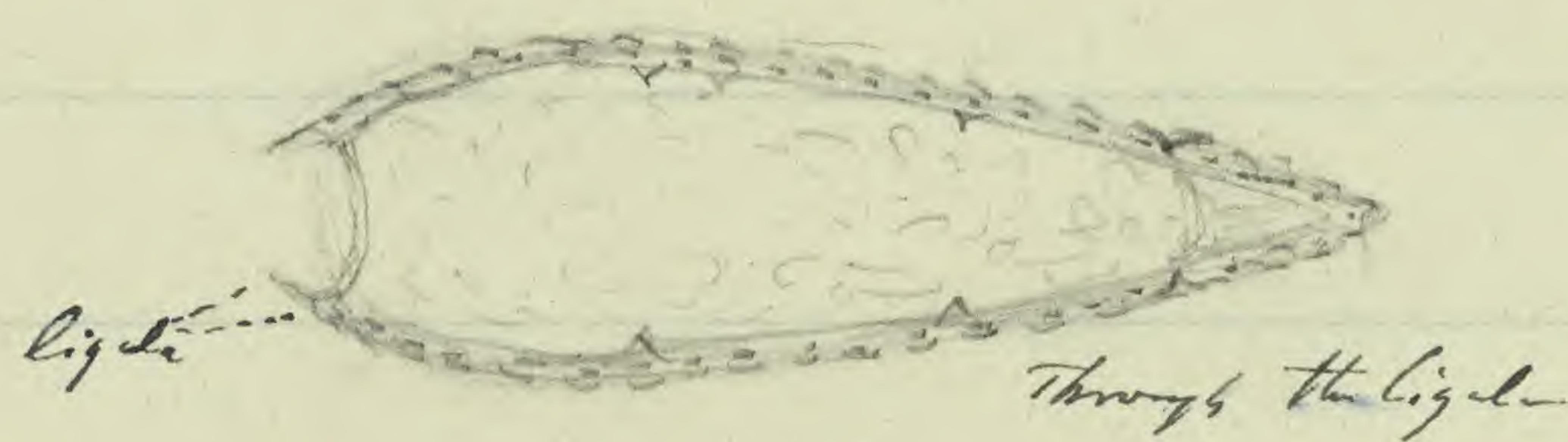
*Linum Riphoides*, marshy places on Clear Creek, Empire City, Colorado Aug 14 1881  
transverse  
sections of leaf

$\times 10$



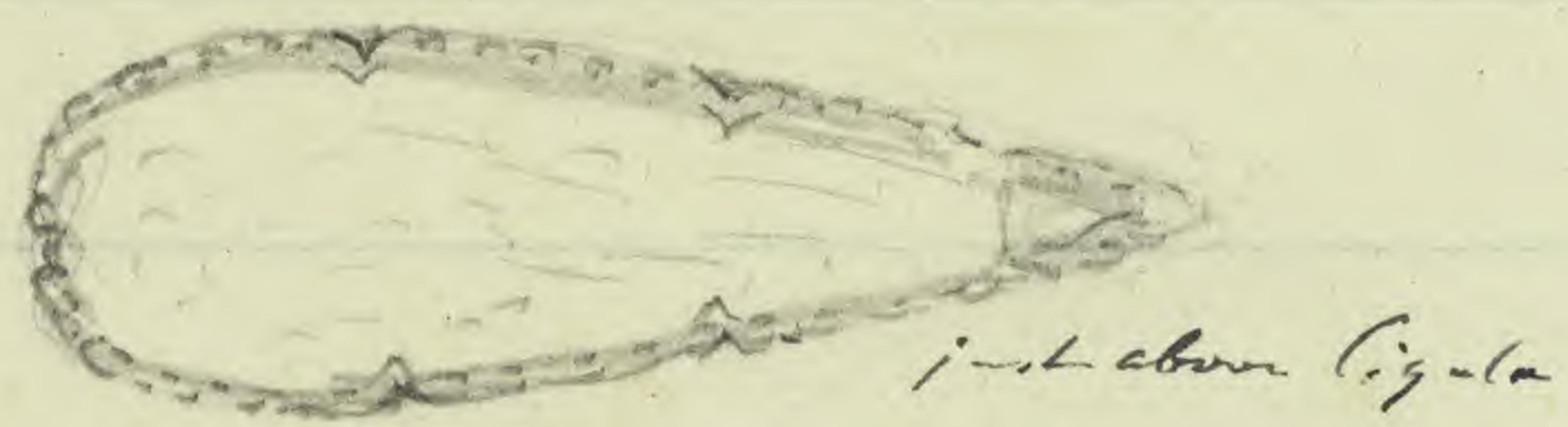
near base

membranous stalk

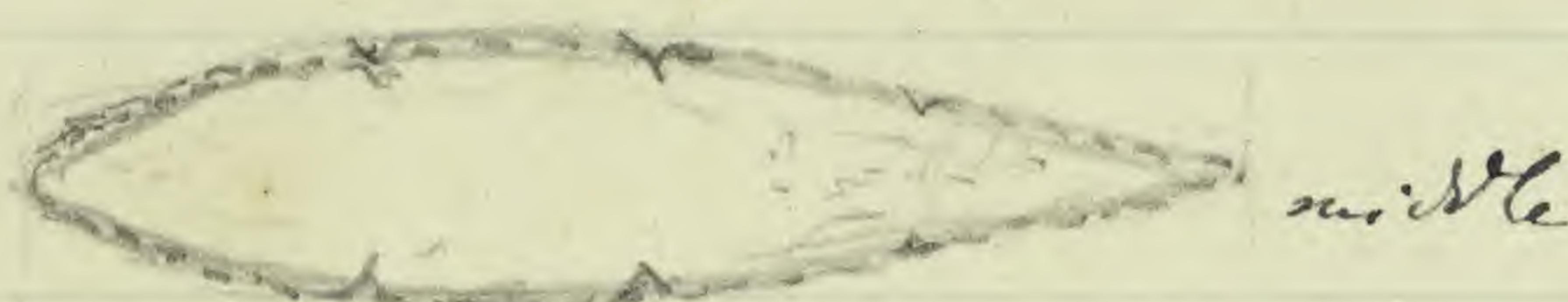


ligule

through the ligule



just above ligule



middle



near tip

back of leaf

upper or  
inner part

vertical  
section

$\times 4$



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those undersigned  
have been received & acknowledged  
Revis. sets marked once  
more marked & sent to

No. 1.	Kew Gardens	99 spec's + 12 nov/5
No. 2.	A Gray	99 ... + more
No. 3.	Dr Buchanan	99 ... +
No. 4.	Prof Braun	99 ... +
No. 5.	Smithsonian Inst.	99 ... +
No. 6.	Berlin	99 ... +
No. 7.	Paris	99 ... +
No. 8.	Vienna	99 ... +
No. 9.	St Petersburg	99 ... +
No. 10.	Philad. Acad	99 ... +
No. 11.	Torrey	99 ... +
No. 12.	München	99 ... +
No. 13.	Bolander	99 ... +
No. 14.	Chapman	99 ... +
No. 15.	de Candolle	99 ... +
No. 16.	Bosscher	99 ... +
No. 17.	Shaw Miss. Migne	99 ... +
No. 18.	Porter	99 ... +
No. 19.	C E Smith	99 ... +
No. 20.	Lenormand	99 ... +
No. 21.	Caruel	99 ... +
No. 22.	Cosson	99 ... +

For Am. April 1868

Revision

No. 23.	Andersson	99
No. 24.	Durand	98 +
No. 25.	Canby	97 +
No. 26.	Perry	97
No. 27.	Hill	97 +
No. 28.	Cesari	97
No. 29.	Müller Austria	97
No. 30.	Brewer	97
No. 31.	Tuckerman	94
No. 32.	Boott	94
No. 33.	Senkenbergia	92
No. 34.	Kellogg	92
No. 35.	Leibig	92
No. 36.	Bigelow	92
No. 37.	Cesati	92
No. 38.	Revenel	92
No. 39.	Thurber	92 -
No. 40.	Lepham	92
No. 41.	Leibhardt	91 Parker
No. 42.	Parlatore	91
No. 43.	Eaton	91
No. 44.	Mann	91
No. 45.	Clinton	90
No. 46.	Curtis	88
No. 47.	Vasey	88
No. 48.	Mead	86 -

Revision sets to



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49. Bebb	86 Specimens	755	67 Specimens
50. Hegelmair	85	76	67
51. Fries	83	77	67
552. Notaris	83	78	67
553. Schott	83	79	67
554. Olney	83	80	66
555. <del>Samuel Robbins</del>	83	81	65
556. <del>E. Hilgard</del>	83	82	65
57. Commons	83	83	65
=58. <del>Leuckhardt</del>	82	84	65
-59. <del>Douglas</del>	81	85	63
60. Grisebach	81	86	63
61. not rec'd. Berlin!	81	87	63
62. <del>not rec'd. in Europe</del>	81	88	63
63. <del>Berlin</del>	79	89	63
64. <del>Duchingian</del>	79	90	63
65. not rec'd. in Europe	75	91	63
66. Berlin	75	92. C. F. Austin	62
67.	73	93. Lindheimer	62
68.	73	94. Peck	62
69. St. Louis	73	95. Gilman	62
70.	73	96. O. B. Wheeler	62
71.	72	97. Diffenbaugh	62
72.	72	98. Burke	62
73.	69	99. A. S. Smith	62
74.	69	100. P. P. Porter for J. A. C. 62	62

MISSOURI BOTANICAL GARDEN  
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9862



0  
cm

1 2 3 4 5 6 7 8 9 10

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710 *Vaseyi*

*Juncus tenuis* var *congestus*

Banks of Grand Lake, Middle Park, Col Aug 5 1881  
base of leaf and auricle

Sections of leaf x 10



above base middle near tip

leaves very slender, less than  $\frac{1}{2}$  off or  $\frac{1}{3}$   
line diameter, very slightly laterally compressed  
or nearly terete.



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cm

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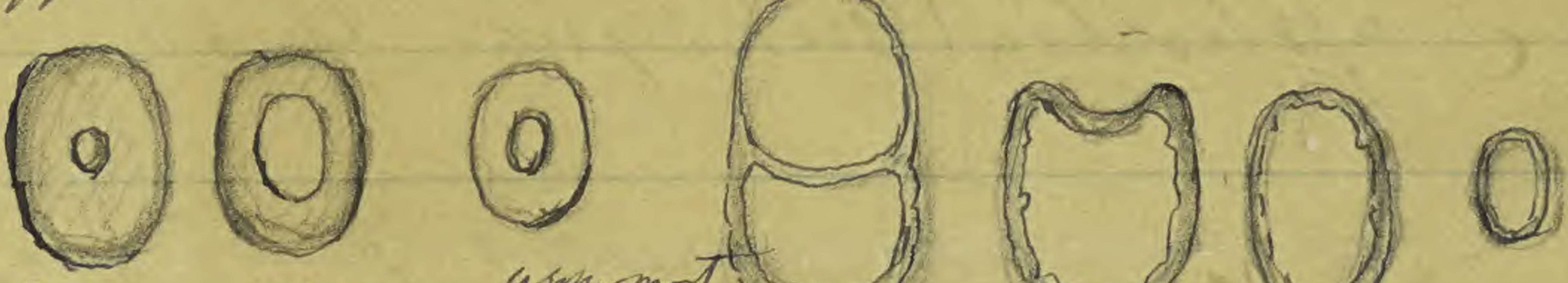


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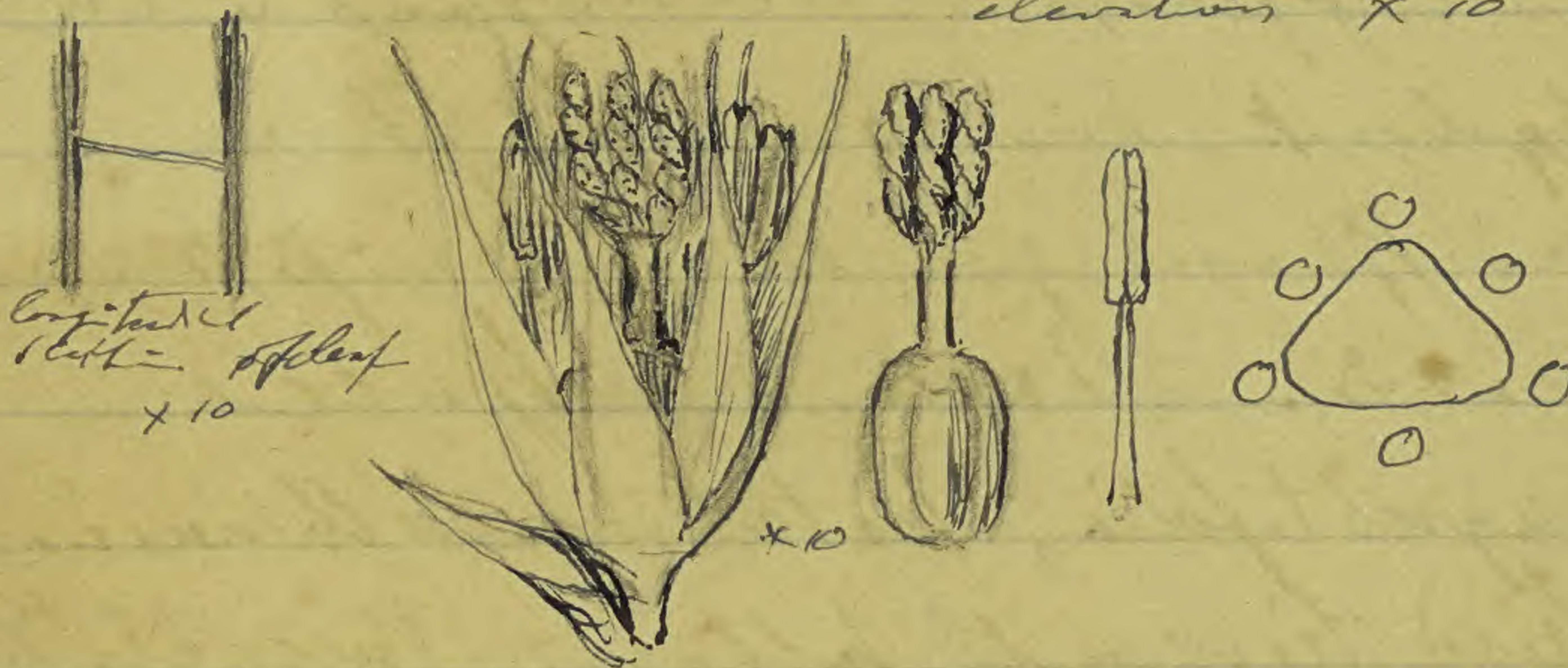
*Juniperus Monosperma*

very common in wet places, Berthoud Pass just now in flower July 26, 1881, while Parry's a little higher up is not yet flowering and shall'd higher up and also in the Pass is just past flowering

Plants here 6-10 inches high with only a single head, often consisting of 2 crowded together - two or three leaves on stem, with membranaceous auxiliaries, more distinct in the lower leaves, on the uppermost one narrower



lower upper uppermost  
part of stem, section  $\times 10$  section of leaf at different  
elevations  $\times 10$



enlarged  
single leaf  
 $\times 10$

$\times 10$



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cm

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9864  
St. Helena, Nebr. 16 Jul. 81.

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*Euphorbia glauca*

Grafted from Dr. .

*Euphorbia glauca* ?

St. Helena 16 Jul. 81, mit großer Menge  
500 Pflanzen (m. Wurzeln und - catt)  
Habens, wo eben ein Mann  
näherstand in Moosgras und  
Wasser. Knoll, wie *Yucca*  
*angustifolia*, Peristemum allidus. /m  
Kiel hier nicht gelten. (*Yucca* aber  
oft nicht farbig.)

Fr. anerkannt



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cm

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Succow Pyglaea

Note in Hb. Standolle Aug 1868. original species, like  
effusus, but flowers much larger, more like glauca  
but flowers green.



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cm

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*S. sp. Halli* n. sp.

*S. sapinus* var. *Halli*

1845 Adams 2nd edition  
also with broader pet.

*S. sapinus*, Europe, to be compared  
Frigg has nothing good of it



0 1 2 3 4 5 6 7 8 9 10

cm

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GEORGE ENNIS MANN DIAZ

height of  
petal of  
flower  
that in  
frication  
lime and  
M. ven.  
an east



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cm

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